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EDITORIAL COMMENT

I WANT to ask a question which will seem to many readers as "academic" in the most negative sense of that word—i.e. epistemological nitpicking, remote from practical and empirical interests: *how does the social science of medicine justify its title to society, science and medicine?* My points in the next paragraphs are that if the question is academic, this is true only in the sense that it marks the path of self scrutiny for the academy based social study of medicine; if it seems remote from the tasks of constructing and evaluating strategies for improving people's lives, then this is a measure of the unrealized potencies of social science inquiry.

My question subsumes two closely related questions. First, what is the basis for connecting science to social science? Second, what is the usefulness of Western medical beliefs for the scientific and comparative study of medical beliefs and practices? Allow me to take up each of these questions separately. While most of my comments will refer explicitly to features found in the medical anthropology literature, I think that analogous features can be shown for other disciplines making up the social (and behavioral) science of medicine.

(1) The first question, asking the connection between science and social science, raises many complicated issues about the nature of science. For example, is it appropriate to assert, as Thomas Kuhn does, that a normal science is dominated by a single paradigm and, if he is correct, can social science ever meet this condition? Are the objects of social science inquiry fundamentally different from the objects of natural science and, if they are, should we be speaking about two distinctive scientific traditions and two different systems of induction? While it is unnecessary to pursue such issues here, I do want to call attention to two facts in this regard. First, there is the obvious fact that the legitimacy and authority of the claims social scientists make for their knowledge are ultimately decided on such issues. Second, there is the less obvious fact that within the different discourses of the social sciences there are tendencies at work that make it difficult—or, worse still, make it unnecessary—to ask questions about the epistemology and authority of social science knowledge.

One of these is the tendency to reduce questions about science and social science to comparisons *within* the social sciences. It is popular to speak about social science in terms of polar approaches. At one pole are versions of cultural hermeneutics, intended to interpret people's beliefs and behavior in their own terms; at the other end are accounts based on a natural science model, intended to explain beliefs and behavior in the observer's terms. Anthropologists frequently speak about the hermeneutic and natural science polarity using the terms "emic" and "etic", where emic refers to descriptions of ideas and systems of ideas which are purported to exist in an actor's mind, and etic to the scientist-observer's independent report of the actor's "behavior stream" ("all the body motions and environmental effects produced by such motions...") [1, pp. 329–330].

I describe this polar framework as an obstacle to understanding the connections between science and social science, because it locates its main issues within social science discourses and thus assumes what must first be argued. It assumes, on the one hand, that there is a consensus about what constitutes natural science and, on the other hand, that there either exists or is evolving a pre-theoretical observation language that underwrites scientific inquiry and objectifies scientific knowledge.

In fact, there is no such consensus and, what is more, different accounts of natural science have different implications for the directions in which a social science of medicine could be expected to develop. Having raised this issue, let me assert what many philosophers of science have argued forcefully: whatever account of science we finally accept, it must be empirical without being empiricist. That is to say, it must be empirical in the sense that its claims are constrained by observations of causes and effects in the material world. But it must also regard scientific theories as holistic structures in the sense that no scientific term is considered to be "meaningful in virtue of an immediate relationship with the extra-linguistic world in abstraction from other terms of language" [2, pp. 2–3], or free from epistemological scrutiny [3]. In brief, it would be an account which, by rejecting the possibility of a pre-theoretical observation language, keeps every etic judgement under the cloud of suspicion that it will one day be shown to originate in and belong to the observer's emic knowledge.

Another tendency, closely related to empiricism, is to reduce questions about science and social science to what are essentially technical issues, that is, matters of discovering the procedures and criteria, such as falsifiable hypotheses and statistically correct measures and tests, which make statements and accounts scientific. In reality, this is only a very incomplete explanation of how scientific knowledge is produced. Scientific knowledge is simultaneously determined by appropriate technical factors, various sets of social relations (e.g. between researchers and their informants), social arrangements (e.g. the organization of professional communities to selectively recruit new members, to establish rules and instruments for pooling and exposing among themselves the knowledge they produce), and social interests (e.g. funding priorities set by the State). Let me underline the point I am making here. I am saying that (a) scientific knowledge always has social determinants, (b) each of these determinants can take a variety of forms, no one of which is intrinsically more scientific than another, and (c) different forms and combinations of forms affect the kinds of knowledge that will be produced. More than that, social determinants of scientific knowledge also determine the *specificity* of discourse, i.e. they make it likely or unlikely that certain questions will be framed and that certain orders of objects and events will or will not be materialized and observed. Thus, specificity is intrinsic to all scientific discourses, and it is a mistake to

suppose that it results from a lack of methodological sophistication or that it can be reduced by agglutinating varieties of knowledge, e.g. "psycho-social", which share the same social determinants.

Of course all of this—the critique of a pre-theoretical observation language, the comments about the social determinants of scientific knowledge—is old news and some history-minded writers have already relegated empiricism in social science to an age now past. Yet even a quick review of the social science literature on medicine indicates that this obituary is premature, that the hegemony of empiricist and technologist views of science is only slightly diminished and continues, among other instances, in the casual deployment of unargued but deeply theoretical concepts of society. For a variety of reasons this has been less true of anthropology, although it seems that these tendencies are strengthening rather than diminishing in recent studies by medical anthropologists working in industrial societies.

(2) My second question raises a familiar and important issue about the degree to which we can invest in the concepts and classifications of Western medicine as instruments for identifying and organizing our theoretical and practical interests. For anthropologists, this is a particularly sensitive issue, since in many tribal and traditional societies there is no locally recognized phenomenological domain that corresponds to the range of circumstances and events which we in the West identify as "medical". At this point many readers will want to explain that although the question is undoubtedly important, there is already a satisfactory answer to it: (a) Western medical science is dominated today by a biomedical perspective which gives priority to mechanistic and pathophysiological meanings of sickness, but (b) the social science of medicine can neutralize the biomedical bias by distinguishing between "disease", referring to dysfunctions or organs and organ systems, and "illness", referring to people's experiences and perceptions of disvalued changes in states of being and social function.

This answer raises a variety of issues, but I want to call attention to only one of these: the disease-illness framework makes individuals the *terminus a quo* of medical events. On the one hand, disease is identified as an intrasomatic process and, on the other hand, the illness process is conceptualized as beginning with the individual's awareness of changes in his body feeling. From a sociological point of view, this means that the disease-illness framework does not advance far beyond the biomedical conception it is intended to displace, because it constitutes a discourse whose reality and substance consist of the perceptions, experiences, and behaviors of individuals, but which defers theories about the social relations and processes which have determined what these individuals are perceiving, experiencing, and intending. They share similar desocializing tendencies and although only the biomedical conception is inextricable from empiricist assumptions, the disease-illness framework can offer only a weak foundation for a post-empiricist approach to medicine.

The disease-illness division follows the etic-emic one by abandoning questions about connections between science, medicine, and society. An important instance in this regard is the issue of medical ideology. For many readers, "ideology" carries a negative meaning and is clearly antithetical to science. But I am thinking of a more neutral conception, of ideology as a person's knowledge of human subjects in their social settings. More specifically, I mean ideology to refer to the unintended product (i.e. knowledge) of practices, such as the collaboration between the clinician and his client or the researcher and his subject, through which a person collects ideas and evidence about (a) himself, others, and human collectivities as loci of perceptions, initiatives, potencies, and responsibilities, and (b) the relations of dependence, domination, authority, etc. which exist between and among these different human subjects and collectivities. According to this view of ideology, medical practice produces, simultaneously, medical knowledge and ideological knowledge, social science practice (research, reading a text) produces scientific knowledge and ideological knowledge, and so on.

Ideological knowledge is inevitable and, in this sense, it is mistaken to suppose that ideological knowledge and scientific knowledge are either contradictory or analogous forms. Ideological knowledge is dangerous so long as it remains tacit and threatens to make historically particularistic conceptions of the human subject appear as ontological givens and, under the aegis of science, universal. The foible of empiricism is that, by claiming for itself a separation of social determinants from scientific knowledge, it becomes more not less ideological. The limitation of disease-illness and etic-emic distinctions is that while they seem to offer an alternative to empiricist epistemology ("let me categorically reject any notion of superior and inferior realities associated with emic and etic epistemological options" [1, p. 331]) they promote a position of epistemological individualism and relegate questions about the determinants of scientific knowledge to a specialist concern within the philosophy of science. In either event, the desocialization of scientific knowledge guarantees the *uncritical* reproduction of a discursive specificity that can be criticized on two grounds.

First is a tendency, growing in the field of medical anthropology, to locate the unique practical importance of social science in a therapeutic nexus, often in clinical settings where e.g. social science concepts and methods are seen as instruments for training clinicians to uncover differences between their own and their clients' views of clinical reality and act as a means for improving the management and compliance of clients, consumer satisfaction, and treatment outcomes. This therapeutic tendency operates at the expense of investigating and theorizing what one would suppose to be the forte of an authentically *social* science of medicine. This is what can be called the "social distribution of sickness", meaning the socially determined patterns of differential (a) exposure and vulnerability to agents and circumstances causing or intensifying sickness, (b) access to medical services and resources, including access to alternative etiological accounts of particular life situations (including access to social and political explanations) and to ownership and control over the material and social factors that produce actors' medical and ideological knowledge of the sickness episodes they participate in, observe, or intend to protect themselves against. In this context, the organization of therapeutic goals and clinical interests is part of the problematic of the social distribution of sickness. The latter view does not, then, exclude clinical

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concerns [e.g. 4-6], nor does it diminish the importance of research which is intended to improve people's lives. But it does define social science interests which are not always reconcilable with those of clinicians [7].

A second and closely related matter is the professional disinterest in social science as an object of inquiry, i.e. the tendency to regard the concepts and methods of social science merely as instruments for either achieving goals set by medical practitioners, planners, and consumers or illuminating issues which are interesting to social scientists. Now it should not be denied that social science can have immediate and practical consequences in clinical settings, particularly where clinician and client are separated by great differences in culture and class and the clinician's ability to bridge these means the difference between humanistic and veterinary standards of medical care. Yet the instrumental importance of social science in more common clinical settings is sometimes both exaggerated, in the sense that results fall short of expectations, and overlooked, in the sense that the authority of social science is working in other, unintended, directions. The point I want to make here is that an authentic social analysis, i.e. one which regards society as more than an epiphenomenon of the beliefs and behavior of the individuals who "belong" to it, regards the concepts and methods of social science not only as the instruments which allow us to study the social distribution of sickness, but recognizes that they are also factors which have helped determine particular distributions. That is to say, the span of discourse must be broad enough to include, as an object of inquiry, the role of social science in the medicalization of social relations, to study and explain its historically determined capacity for subverting a widening range of social conditions to clinical judgements—normal or abnormal, healthy or sick, therapeutic or inefficacious—and new forms of control [8-10].

This brings my comments full circle, with a question. If the authority of social science knowledge can no longer be found in empiricist and technology centered versions of science, then what is its source? Again a complicated question, raising many issues [2, 3]. I shall finish by calling attention to one of these: it is difficult to imagine an authoritative post-empiricist social science of medicine that is incapable of self scrutiny, not in the old sense of asking whether its methods, concepts, and measures are sufficiently rigorous, but in a new sense of also giving an account of the specificity of its discourses and the ideological knowledge which shaped them. It is in this sense that my comments are intended as polemic for, not against, a social science of medicine.

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STIGMATIZED HEALTH CONDITIONS

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Abstract—Anthropologists only recently have turned their attention to stigmatized populations in American society. The papers in this collection address varied issues of stigma and health: life career experiences of those with varied stigmatized illnesses; issues of identity, perception, and cognition related to specific health conditions; modes of coping with stigma—personal and group adaptive strategies, and positive functions of such adaptive strategies. The studies draw from a diverse range of field populations: diabetics, the deaf elderly, dwarfs, and severely scarred former burn patients. These papers originally were presented in a symposium entitled *The Anthropology of Stigma* organized and chaired by Joan Ablon at the annual meeting of the American Anthropological Association, Los Angeles, November 14–18, 1978.

Anthropologists have come late to studies of stigma, marginality, and deviance in American society. Typically, we have turned our research gaze to the non-western, to the esoteric, and to the normative and the ideal in behavior. The non-typical, the deviant, and the disdained were characteristically ignored, treated in footnotes, or considered within a quasi-religious mystique of the impure or tainted, a symbolic categorization, rather than universal phenomena integrated into other aspects of life. Anthropologists today have come to view the familiar and the mundane of contemporary society as worthy and even urgent topics for research. After focusing on esoteric and exotic ailments and health conditions around the world, we now are turning to the belief systems and behaviors surrounding such common health related states as diabetes or deafness in our own society. The emerging profile from contemporary studies in health research reflects a richness of belief—fears, myths, images—and ritualistic behaviors equivalent to that which has been documented cross-culturally.

Anthropologists who are now studying issues in contemporary health fields often find themselves within the more traditional bailiwicks of sociologists who, in keeping with studies of other social phenomena in the United States, got there first. Some sociologists have written painstakingly on the social role and behavior of the stigmatized. Others have also antedated us in characterizing and dissecting "the sick role" which has served as a rich heuristic device for structural musings. Sociologists have tended to sketch normative patterning of behavior as effected by institutional and often unqualified and undefined societal, presumably middle class, social expectations and values. Rarely have specific cultural, social or personal variations been accounted for. Anthropological studies of specific populations and cultural groups may provide rich arenas for testing propositions and suggesting culturally varying answers to provocative questions posed in this literature.

Goffman in his classic work *Stigma* [1] provided a seminal prototypic study—a rich blueprint for the definition of vital dimensions and issues to be con-

sidered when addressing stigma as a social and cultural phenomenon.

Society establishes the means of categorizing persons and the complement of attributes felt to be ordinary and natural for members of each of these categories. Social settings establish the categories of persons likely to be encountered there. The routines of social intercourse in established settings allow us to deal with anticipated others without special attention or thought. When a stranger comes into our presence, then, first appearances are likely to enable us to anticipate his category and attributes, his "social identity"—to use a term that is better than "social status" because personal attributes such as "honesty" are involved, as well as structural ones, like "occupation".

We lean on these anticipations that we have, transforming them into normative expectations, into righteously presented demands.

While the stranger is present before us, evidence can arise of his possessing an attribute that makes him different from others in the category of persons available for him to be, and of a less desirable kind—in the extreme, a person who is quite thoroughly bad, or dangerous, or weak. He is thus reduced in our minds from a whole and usual person to a tainted, discounted one. Such an attribute is a stigma, especially when its discrediting effect is very extensive; sometimes it is also called a failing, a shortcoming, a handicap [2].

This differentness, when negatively valued, is perceived as deviance. The fact that deviance is an artifact, a creation and product of society has been pointed up by sociologists. Lemert [3] and Becker [4] have emphasized the significance of the social labeling of behavior. Says Becker:

Social groups create deviance by making the rules whose infraction constitutes deviance, and by applying those rules to particular people and labeling them as outsiders. From this point of view, deviance is not a quality of the act the person commits, but rather a consequence of the application by others of the rules and sanctions to an "offender". The deviant is one to whom the label has successfully been applied; deviant behavior is behavior that people so label [5].

The rituals of interaction which often obtain between "normals" and the stigmatized have been

painstakingly explored by sociologists with particular interests in the physically different or handicapped [6-8]. In explicating the stylized reciprocal behaviors which take place between "normals" and the stigmatized, they have provided a systematic conceptual system of interpersonal interaction that has sent forth scholars in a number of directions to pursue research related to stigma and deviance in the health fields.

ILLNESS AS DEVIANCE

The condition of ill health as a deviant state—"the sick role"—has been given significant attention by leading American sociologists. Talcott Parsons [9] provided what has become the prototypic model for consideration of "the sick role". The Parsonian model defined the sick role as a socially deviant status in relation to institutionalized social expectations, sentiments and sanctions. Parsons defined four aspects of the institutionalized expectation system relative to the sick role: (1) the sick person is exempt from normal role responsibilities, relative to the nature and severity of the illness. (2) The sick person cannot be expected to get well purely by an act of will. His illness is not his fault. (3) The state of being ill is in itself undesirable and carries an obligation to get well. (4) There is the further obligation to seek technically competent help, usually a physician, and to cooperate in the process of trying to get well.

As an ideal type the Parsonian model has been widely applied, analyzed and criticized. Problems of validity and fit of the model for use in differing cultural groups and for dealing with the spectrum of diverse physical and mental ailments have emerged from a great variety of studies reported in the literature [10]. The model has the best fit for temporary and acute, easily distinguished physical episodes of illness in "middle-class" American society. For other health problems in our society such as mental disorders and chronic conditions and for its general use among varied subcultural groups the model is less applicable.

Freidson [11] provides a critique of Parsons particularly fruitful for the anthropologist. He sees the Parson's construct as culture-bound. He further poses hard questions dealing with the etiology of attributions of deviance and the definitions of terms which are taken for granted by Parsons. For example, Freidson points up knotty problems inherent in trying to measure or define such pivotal concepts as *responsibility* and *legitimacy* as Parsons uses them. Some illnesses are more biophysically discrete or identifiable, thus more obviously absolving the bearer from obligations or fault, because they are objectively visible, provable, and thus more easily sanctioned than are others with a more significant social component.

How does a health state become deviant? Freidson notes that in the case of certain illnesses, such as venereal diseases, there is a moralistic judgement of blame made and the bearer may be held responsible for the illness. Likewise he states that medical personnel have been noted to withhold respect and care from certain patients whose problems obviously resulted from drunkenness, carelessness, or those who had attempted suicide. Such medical problems may

be stigmatized to the extent that by social taxonomy, the illness becomes a crime in the eyes of the society.

Freidson gives much attention to the legitimacy of illness. He notes that if stigma is attached to the attribute, following Goffman [12], stigma spoils normal identity permanently.

What is analytically peculiar about the assignment of stigma is the fact that while a stigmatized person need not be held responsible for what is imputed to him, nonetheless, somewhat like those to whom responsibility is imputed, he is denied the ordinary privileges of social life. As the term itself implies, the societal reaction, although ambiguously, attributes moral deficiency to the stigmatized. Furthermore, unlike other imputed qualities, stigma is by definition ineradicable and irreversible: it is so closely connected with identity that even after the cause of the imputation of stigma has been removed and the societal reaction has been ostensibly redirected, identity is formed by the fact of having been in a stigmatized role: the cured mental patient is not just another person, but an ex-mental patient; the rehabilitated criminal gone straight is an ex-convict. One's identity is permanently spoiled.

... A stigma furthermore, interferes with normal interaction, for while people need not hold the deviant responsible for his stigma, they are nonetheless embarrassed, upset, or even revolted by it. The "good" stigmatized deviant is therefore expected to take special pains to organize his behavior and his life in such a way as to save others from embarrassment. For "normal" illness, many normal obligations are suspended; only the obligation to seek help is incurred. But in the case of the stigmatized, a complex variety of new obligations is incurred. Whereas in the former instance the burden of adjustment (through permissiveness and support) lies on the "normals" around the sick person, the burden in the latter lies on the stigmatized person when he is around "normals". [13].

Freidson provides a classification of types of legitimacy adhering to illness states. Within these categories he identifies six analytically distinct varieties of deviance which while each being called "illness", carries differing consequences for the individual and his social system.

The area of Freidson's analysis which reflects a prime traditional divergence in focus between the sociologist and the anthropologist is in the concept of illness careers. Freidson argues that constructing the career of the deviant on the basis of the medical specialists, agents and agencies that he moves through is more useful analytically than examining the changes in the deviance imputed to him or of his own changes in self. Anthropologists frequently have chosen a more personal approach, studying individuals and groups as culture bearers and behavior creators, rather than focusing on the institutional contextual structures with which individuals and groups must deal. In fact, Foster [14] states that a basic difference between the research of medical anthropologists and medical sociologists is that medical anthropologists have tended to study the patient, often as underdog, as he proceeds through the mazes of the bureaucratic medical systems, while medical sociologists have focused on these systems and the associated personnel. Indeed it is in this very aspect of traditional foci that medical anthropologists are reflecting change, now choosing from the multitude of varied options open to them for research in health care systems and in health related problems in the

community. Patients, illnesses, systems and personnel are all appropriate subjects for inquiry.

IMAGES

In the study of diseases which are treated with a special fear, dread, or repulsion, the anthropologist finds a field rich for the investigation of the totality of values and behaviors common to our contemporary society. Disease has been thus used as an analytic prism for cultural understanding by social critics. For example, Sontag [15] has produced a historical and literary analysis of the meanings adhering to tuberculosis and cancer in the Western world. She vividly compares and contrasts the images, myths, and qualities attributed to these diseases and the individuals bearing them.

Any important disease whose causality is murky, and for which treatment is ineffectual, tends to be awash in significance. First, the subjects of deepest dread (corruption, decay, pollution, anomie, weakness) are identified with the disease. The disease itself becomes a metaphor. Then, in the name of the disease (that is, using it as a metaphor), that horror is imposed on other things. The disease becomes adjectival. Something is said to be disease-like, meaning that it is disgusting or ugly [16].

The consequences of stigma are explained:

Any disease that is treated as a mystery and acutely enough feared will be felt to be morally, if not literally, contagious. Thus, a surprisingly large number of people with cancer find themselves being shunned by relatives and friends and are the object of practices of decontamination by members of their household, as if cancer, like TB, were an infectious disease. Contact with someone afflicted with a disease regarded as a mysterious malevolency inevitably feels like a trespass; worse, like the violation of a taboo. The very names of such diseases are felt to have a magic power [17].

Since getting cancer can be a scandal that jeopardizes one's love life, one's chance of promotion, even one's job, patients who know what they have tend to be extremely prudish, if not outright secretive, about their disease. And a federal law, the 1966 Freedom of Information Act, cites "treatment for cancer" in a clause exempting from disclosure matters whose disclosure "would be an unwarranted invasion of personal privacy". It is the only disease mentioned [18].

Sontag graphically through generous references to literature describes the social images associated with those individuals afflicted with TB and cancer.

Many of the literary and erotic attitudes known as "romantic agony" derive from tuberculosis and its transformations through metaphor. Agony became romantic in a stylized account of the disease's preliminary symptoms (for example, debility is transformed into languor) and the actual agony was simply suppressed. Wan, hollow-chested young women and pallid, rachitic young men vied with each other as candidates for this mostly (at that time) incurable, disabling, really awful disease. . . . Gradually, the tubercular look, which symbolized an appealing vulnerability, a superior sensitivity, became more and more the ideal look for women—while great men of the mid- and late nineteenth century grew fat, founded industrial empires, wrote hundreds of novels, made wars, and plundered continents [19].

Stereotypes about character, proclivity for sexual and emotional passion, personality, and morals have

all been attributed to those with consumption and other illnesses. In some periods a disease was a reflection of a good or bad character, a product of a strong or weak will, or a punishment for moral behavior. Sontag argues that diseases are reflective of attitudes toward the society of the time.

Master illnesses like TB and cancer are more specifically polemical. They are used to propose new, critical standards of individual health, and to express a sense of dissatisfaction with society as such. Unlike the Elizabethan metaphors—which complain of some general aberration or public calamity that is, in consequence, dislocating to individuals—the modern metaphors suggest a profound disequilibrium between individual and society, with society conceived as the individual's adversary. Disease metaphors are used to judge society not as out of balance but as repressive. They turn up regularly in romantic rhetoric which opposes heart to head, spontaneity to reason, nature to artifice, country to city [20].

ISSUES

As we approach the study of stigmatized health conditions there are a variety of dimensions yet to be well explored:

(1) The nature of the illness. Why is a stigmatized condition so labeled? What is its history; its attributed characteristics? Leprosy, of Biblical fame is associated with hideous disfigurement. Venereal diseases are often associated with clandestine or immoral sexual activities. Diabetes, a sometimes crippling disease, more often inhibits the social, physical and sexual activities of its bearers, and fear of its inheritance may inhibit marriage. Cancer carries the mystique of death. It is as Sontag notes "The disease that doesn't knock before it enters. . . a ruthless, secret invasion". The cosmetic prescriptions of our society have created negative social stimulus values for the physically maimed or disabled or those simply different: those "too" short, "too" tall, "too" fat. How do the perceptions of these characteristics relate to the larger cultural context?

(2) The nature of the populations who are perceived to carry the illness. Health statistics highlight the fact that poorer populations, often non-white ethnic groups, experience also poorer health than other segments of society. Disenfranchised from many benefits and services of society by their poverty and ethnic identities, persons of these populations from their first help-seeking experience, enter the medical system as stigmatized patients. They may exhibit diverse cultural beliefs and linguistic and "compliance" patterns which early on serve to alienate them from care providers.

(3) The kinds of treatments and practitioners sought may be stigmatized. Alternative ethnic or culturally identified types of therapists such as faith healers, curanderos, acupuncturists, laetrile therapists, naturopaths, or rollers may be held in disrepute by the larger society or defined as illegal in their practice of healing modalities. Thus, the patient pursues treatment warily, cognizant that the western or metropolitan system regards his seeking as superstitious, useless, fraudulent, or illegal.

(4) How do persons with stigmatized health conditions cope with the daily insults which endanger

their personal identity, their social life, and their economic opportunities? What individual and social patterns have emerged to insure psychic and social survival for the stigmatized?

Sociologists often have constructed *normative* realities, described processes of impersonal-persons as they interact with one another in chance or stylized social encounters. The incisive interactional analyses presented have explicated consciously and unconsciously-motivated phenomena of pretense in the seemingly common-place of rituals of social interaction. Anthropologists are able to contribute empirical richness from their studies of diverse populations and specific cultural and social systems, adding affect and variance to normative descriptions.

Typically medical anthropologists have broached the subjects of deviance and stigma only when dealing with mental illness. Edgerton has presented an unusual cross-cultural exploration of varied forms of deviant behavior including mental illness as one such form of behavior [21]. Edgerton focused on the negotiation process in the "recognition" of mental illness in an African study [22]. In *The Cloak of Competence* [23], he explores the dimensions of stigma in the lives of mentally retarded adults in Southern California, portraying through life histories the coping processes of his informants.

In another rare instance of an anthropological treatment of a stigmatized patient population, Gussow and Tracy [24] illustrate how the anthropological approach may contribute to the conceptual base developed by sociologists. The authors note that Goffman doomed the deviants of his hypothetical population to eternal stigmatization in their own eyes as well as those of society by his premise that the stigmatized apparently accept the very norms that disqualify them. There is no description of destigmatization, disavowal of deviance, or modes of productive coping with stigma, or of positive adaptations to it in his discussions. Gussow and Tracy describe a productive effort by patients to cope with leprosy—perhaps the most stigmatized illness known:

Surely there are other feasible modes of adaptation. One is the development of stigma theories by the stigmatized—that is, ideologies to encounter the ones that discredit them, theories that would explain or legitimize their social condition, that would attempt to disavow their imputed inferiority and danger and expose the real and alleged fallacies involved in the dominant perspective.

Perhaps the reason Goffman gives so little attention to this line of thought is because he deals mainly with single individuals in brief encounters with normals, usually in "unfocused gatherings". He seems less concerned with patients' efforts toward destigmatization in more permanent groupings, especially in social settings where they live together in more or less continuous interaction, where they are able to develop their own subculture, norms, and ideology, and where they possess some measure of control over penetrating dissonant and discrediting views from without.

It is precisely these circumstances under which a group of "stigmatized" evolve their own stigma theory that interest us here. We are concerned with the meaning of this more or less consciously constructed perspective to their lives and its function in facilitating a linkage with the wider society. To this end, we conceptualize the career patient status as a mode of adaptation to chronic stigmatizing conditions and elucidate its ideological base in a stigma theory.

The argument is developed in terms of problems faced and strategies employed by leprosy patients at the USPHS Hospital, Carville, Louisiana, in their efforts to delineate a viable social and psychological explanation for the widespread prejudices toward leprosy patients. The ideology and strategy presented below serve to provide patients with a means of attenuating self-stigma and altering other stigma [25].

These authors present excellent case examples of what anthropological research can contribute to a so far rich but culturally-limited conceptual literature dealing with stigma.

The papers in this collection were originally presented in a symposium entitled *The Anthropology of Stigma* at the annual meeting of the American Anthropological Association in Los Angeles, 1978. The papers address many issues of stigma and health: life career experiences of those with varied stigmatized illnesses; issues of identity, perception, and cognition related to specific conditions; modes of coping with stigma—personal and group adaptive strategies; and positive functions of such adaptive strategies. The studies draw from a diverse range of field populations: diabetics, dwarfs, severely scarred former burn patients, and the deaf elderly. The authors regard this collection as an opportunity for the delineation and consideration of significant issues and concepts in a provocative new arena for anthropological research.

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DIABETES AS A STIGMATIZED CONDITION: THE CASE OF LOW-INCOME CLINIC PATIENTS IN THE UNITED STATES

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Abstract—While the concept of stigma has been used to discuss chronically-ill individuals, it has not been incorporated into a more holistic framework that considers cultural, social and economic variables. This paper analyzes aspects of stigma as expressed within a lower-income clinic diabetic population in the United States. Specifically, the effect of diabetes on changes in the individual's physical abilities, social interaction, employment, and perceptions of self-care are discussed as they interact with social isolation and stigma. Stigma as a social consequence of diabetes for this particular group, is examined as it relates to issues of self-care, non-compliance with medical regime, and conflicts with practitioners.

INTRODUCTION

The concept of stigma was investigated among a group of low income clinic diabetic patients in a metropolitan public hospital in the midwest. The patient population was three-quarters black, one-quarter white, and three-quarters female, one-quarter male. The average age of the patients was fifty-seven, reflecting the increase in incidence of diabetes with age [1].

This aspect of the investigation [2] concentrated on lay understanding of diabetes, and perceptions of alterations in informants' lives as a result of the disorder. Following the Fabrega and Van Egerens division of illness behavior [3], stigma is here discussed as it results from the following three categories of life change:

1. the impact on physical activities and routine tasks
2. alterations in the person's social roles in such categories as occupation, family or kinship, recreational, and religious life
3. changes in the conception of self.

Data was gathered on the physical, social, and psychological impact of diabetes through structured interviews. One hundred and fifty-nine adult-onset diabetic clinic patients were interviewed during 1979. All-study patients had been diagnosed as diabetic for at least two years prior to interview, were dependent upon insulin or oral medication to regulate their diabetes, and attended a public health clinic for treatment of their diabetes.

STIGMA, DEVIANCE, AND CHRONIC ILLNESS

Parsons argues for the deviance label to be applied to the sick, suggesting that society has an interest in channeling sick individuals away from each other, away from a formation of a sub-culture of other sick individuals. Rather, the sick individual identifies with a group of non-sick individuals, (normals) and "above all, physicians. The sick thus become a statistical class and are deprived of the possibility of forming a solidarity collectively" [4].

In discussing Parsons' use of the "sick role" to define illness as deviance, Lieban notes the popularity of the concept with Western writers commenting that it makes sense in terms of the emphasis in the United States "on values of responsibility, activity, achievement, and independence" [5].

However, Freidson, among others, has emphasized the limitations of this theory, particularly with illness not serious enough to reduce activity, with incurable illness, with illness not leading to medical consultation, and with "those that occur among working class, peasant, and non-Western populations, among at least some of which being ill in a socially acceptable manner does not require professional legitimation or consultation" [6].

Sociologists Bynder and New, reviewing work on disability in sociology and psychology, argue that the concepts of deviance and stigma are too limited to explain disability behavior. They suggest that socioeconomic and social-factors may have wider explanatory power in determining who becomes handicapped. They warn against the "sociological diagnosis" designed to provide physicians with answers as to why "the patient does not get better even though all medical knowledge and technology indicate that the patient *should* be well or rehabilitated or back on the job. This has been particularly evident in the area of the sociology of disability where an overabundance of terms such as 'sick role' and 'deviance' have been used loosely to explain the behavior of patients that do not fit the medical norm" [7].

Sociologists Levine and Kozloff, moreover, note the confusion regarding definitions of the "sick role". These conceptual and methodological problems include differing definitions of illness, differing emphasis on the patient role or the physician role, and viewing the phenomenon through the eyes of the sick individual on the one hand, or in terms of observer defined characteristics on the other. Attempts to combine these approaches to define the unwell condition include studies of illness analyzed in terms of social class and ethnic group. "In addition, if the sick role is properly viewed as part of a more general temporal process, it is clear that in most writings only small portions of the overall process of acquiring and coping with conditions of 'illness' are addressed" [8].

DIABETES AND STIGMA

Diabetes is a relatively common metabolic disorder that interferes with glucose metabolism. With a chronic illness such as diabetes, the potential for stigma, or discrediting the diabetic, rests in the dramatic and often negative life changes that the disease can bring. For example, short-term metabolic complications and long-term vascular and neurological complications may interfere with an individual's capacity to function in society. In addition, the complex diabetic regimen, including diet, exercise, and often medication, may impinge not only upon the life of the diabetic but also upon the lives of others. Adapting to diabetes may include coming to terms with some degree of stigma.

A factor which must be taken into account in examining stigma and chronic illness in cross-cultural perspective is that of the prevalence and severity of the disorder. The number of persons reporting diabetes in the U.S. was approximately 4.2 million in 1973, which is 2% of the total non-institutionalized urban population. The rate increased with age, sex, race, and low income. Thus, 1 in 770, under 17 years, had diabetes, whereas 1 in 12/13 over 65 had the disease. In addition, there was a "three-fold difference in prevalence and a two-fold difference in incidence between the lowest and the highest reported income groups". Diabetes is a disease whose rate varies with ethnic or culture group, as well as with sex and age. Adult-onset diabetes mellitus is far more common among lower-income Americans, and is increasing most rapidly in lower-income non-White females in the United States. Among particular Native American groups, the incidence with the adult population approaches 50%, making it a familiar, even commonplace disorder [9]. One possibility of such a situation is that stigma within a group might lessen where the disease is more common.

Except in certain dramatic circumstances, for example, when a diabetic goes into ketoacidosis and passes out [10], or when he is discovered to have needle marks or a kit with a set of syringes, diabetes is an invisible condition. Associated stigmatized conditions, such as blindness or lack of a foot or leg bring with them their own sets of altered or reduced social acceptance, and compound the stigma of diabetes.

According to Goffman, diabetics fall into the category of "discreditable" rather than "discredited" precisely because of the hidden nature of the disorder [11].

However, as Goffman uses the concept of stigma, it most dramatically applies in impersonal interaction where stereotyping is strong. While this is often the case for diabetics, they can also be strongly stigmatized in familial and intimate relationships for it is here that issues such as special diet, physical symptoms and nervousness, impotence, and limited energy and mobility become most apparent.

Alterations in physical activities from diabetes including the lessening of strength, periodic weakness, and a variety of symptoms which included nervousness, dizziness, and pains in various parts of the body were sometimes but not always considered stigmatizing within the lower-income community. A series of self reports of levels of health carried out in the mid-western community from which the study population

came, indicate that many individuals do not see themselves in "good" or "very good" health. Other studies of self-reported health status among lower income individuals indicate that one-half to two-thirds usually feel sick, or have a set of symptoms that make them feel less healthy than their children or than their parents or grandparents at a comparable age. In addition, for many of these lower-income Americans, possibly half, it was not considered likely that much could be done about it [12]. Thus, one could conclude that the various symptoms of diabetes [13], would not cause as much stigmatization among the poor as among the middle class. Snow, in her discussion of folk medical beliefs among various ethnic groups, notes the commonly held view of the world as hostile and dangerous, and the helplessness of the individual in facing it [14]. Blame for physical symptoms, therefore, would not necessarily be placed upon the individual.

Another important change which may stigmatize a diabetic is the potential for disabling symptoms and premature death. A diabetic is more likely to develop significant complications including coronary heart disease, peripheral vascular disease, hypertension, retinopathy, cataracts, blindness, kidney disease, infections, and neuropathies. A National Health Institute Survey conducted in 1965 found that 80% of all diabetics interviewed had at least one other chronic condition, and 57% had three or more chronic conditions. Women who are diabetic and become pregnant have a higher incidence of stillbirth, congenital malformation, and neonatal morbidity and mortality [15]. Diabetics are stigmatized for this potential in various ways, within their work situations and family and social relations, as well. Increased knowledge by others of the likelihood of disability, contributes to increased stigmatization. In addition, younger diabetics, facing dating, marriage, and career planning encounter different forms of stigmatization.

Moreover, as a result of peripheral neuropathy and retinopathy, diabetics are far more likely than the population at large to suffer amputations or become blind. These two complications of diabetes, which are not the most common, were nevertheless, those most often cited as feared by the study population. Social circumstances such as social isolation and living in a high crime neighborhood render the disabled diabetic far more vulnerable to injury and less able to take care of himself. Reports were common of stigmatization and isolation from both blindness and amputation among the study population. Twenty-five per cent of the study group cited physical disabilities which in addition to carrying a stigma, exacerbated problems associated with shopping and cooking the special diabetic diet.

Another physical change dramatically affecting diabetics is food intake requirements which alter with diabetes. Obesity was a major health problem among the clinic patients, particularly for women. Based on calculations of Body Mass Index combining height and weight, 60% of the women were categorized as obese. For men, however, only 20% were categorized as obese, 20% were overweight, and the remaining 60% were normal weight. Most attempts to alter weight patterns through clinical intervention with lower-income diabetic populations have failed. Yet many

adult-onset diabetics could lessen their blood sugar level by lowering weight, and possibly by regular exercise thereby decreasing or eliminating their need for medication [16].

In addition, diabetes is an illness which expresses itself in a delicate interaction between food intake, energy expenditure, and patterns of symptoms including nervousness. Many diabetics felt that they must eat more because of incidental diabetic symptoms brought on by low blood sugar or high blood sugar, and also because of their belief that diabetic condition made them hungrier than healthy people. The diabetic's body feels different inside from that of the non-diabetic in that physical symptoms related to eating are more dramatic. Too much of a good thing really can lead to a range of symptoms. Thus, using food as a reward or treat or as a pleasurable part of daily life or to keep up one's strength in the face of particular feelings of "weakness" all may lead to increased symptoms. Prolonged grossly elevated blood sugar levels can lead to passing out, or ketoacidosis, the end result, if untreated, being death. Diabetics then, must learn to adjust to a precariousness and a need of balance in diet which violates many important health beliefs.

Thus, study patients were motivated to maintain their weight by a variety of health beliefs, and to decrease it by advice from practitioners. One patient expressed her own beliefs about body image in the following manner: "I've always been a big person. I come from big people. My mother was big; she weighed two hundred pounds. My father was big; he weighed more than two hundred pounds. I'm not one of those warty little people."

A further aspect of stigma relating to body changes is the necessity to take medication. Insulin, rather than oral medication, was cited by a small percentage of diabetics in the clinic as loathsome. Stigma stemmed, in their eyes, from associations with drug-taking, or with the need to inject their body with some "unnatural" substance. A portion of those in the clinic on oral medication included individuals who were physically and mentally capable of taking insulin but who had refused for these reasons.

Alterations in social roles related to diabetes reflect, in part, the influence of stigma. Of the 159 diabetics interviewed, only 15% felt that diabetes had made no change in their lives. For the rest, changes were basically negative and reflected the common range of problems (such as fatigue, loss of sexual capacity, loss of limb) and their social consequences, such as loss of friends, conflicts with family members, loss of employment, and decreased social life.

When asked about social support, Black women expressed the greater sense of social cohesiveness, almost all of them having someone with whom they felt especially close. This was less true of White women, and Black and White men. Over all, 66% felt that others helped them in some manner to live with diabetes, in that they felt cared about. However, the figure dropped to 47% in terms of having someone to talk with about their diabetic condition. When it came to a major crisis, however, 96% felt that they would have someone there to help. This was often expressed in terms of someone taking them to the hospital in an emergency. Thus, in the day-to-day problems associ-

ated with diabetes, rather than in a crisis, between a third and half of these diabetics felt alone. Conflict among family members was sometimes precipitated by diabetes. Finally, it should be noted that about 25% of the total population lived alone, but this group was not identical with those who expressed some sense of social isolation.

The personal histories of diabetics, their "biographies" as Goffman uses the term, often incorporate descriptions of others forcing inappropriate food on them. Reasons given range from ignorance to denial of the diabetic condition, to anger at the diabetic's difference from a normal person [17].

It is not uncommon in the written biographies of diabetics to note a passage from a period of despair to a period of affirmation of new found health. This contrasts with findings from our study. Possible explanations lie in the "practitioner orientation" of magazines about health care. The practitioner is oriented to help, give a good example, to care for and to cure. Nothing is more encouraging for the practitioner than a "success story". Moreover, most magazine biographies have been written by middle-class diabetics, who may have felt social and economic effects of diabetes less than the study group.

Loss of employment and finances is another notable, but little researched, effect of diabetes. Goffman refers to unemployment as a "blemish of character". For lower-income individuals, unemployment carries a stigma, yet the immediate community also finds explanations for this which puts the responsibility for the stigma beyond the control of the individual. Within the study population, 91% were unemployed. Many of the diabetics received some form of disability benefits, or health insurance. However, 89% had incomes ranging between \$1000 and \$6000 a year, with an average income around \$3000 a year. Lack of money was a major problem. Dependence upon others as a result of both unemployment and disability caused the diabetic to criticize himself, and to feel worthless, as well as increasing conflicts with those upon whom he or she had become dependent [18]. It should be noted that receiving disability income required that the diabetic be certified as totally unable to work. Prior to this certification diabetics were referred to a Vocational Rehabilitation Center, often to receive job training. While diabetics often perceived that this training would guarantee them a job, the likelihood of older unskilled individuals with little education and some physical disability finding a job was remote. However, it was considered unethical from the health professional's point of view to indicate to the patient that failure in the rehabilitation program meant an automatic disability approval. Thus individuals with lowered self-esteem often found themselves rejected from employment after training, which exacerbated the situation. Once receiving disability funds, moreover, they were technically prohibited from taking any kind of part-time employment. Nevertheless, some diabetics continued to find odd jobs, after receiving benefits, in part because it made them feel worthwhile. Public policy has not always been sensitive to these employment needs of the partially disabled. Zola quotes from a passage by Kruse which states:

"The next big push in public welfare should be the development of a high quality of professional programs dealing with the problem of social and emotional adjustment to economic dependency."

Zola comments,

Economic dependency is here assumed. The social and emotional problems resulting from it are the target for change. Such a view could put the sealer on the basic problem of economic dependency by ignoring its causes and exploring or treating only its consequences [19].

Related to employment stigmatization has been the issue of insurance. Mass screening programs to detect asymptomatic diabetes have fallen out of favor shortly after several were instituted because individuals who were determined to be mild or borderline diabetics were no longer "insurable" and could get no health or life insurance. In addition, employers have often given as a reason for not hiring diabetics, their "instability" as workers (seeing them as sickly and more likely to pass out on the job) and as more expensive to insure [20].

Stigma as it relates to employment, however, must be linked with an evaluation of the severity of the disorder, which has physical as well as economic psychosocial dimensions. No such studies of diabetics has been carried out [21].

Problems of marriage and intimacy can arise due to diabetes. Diabetes runs in families and carries with it, like other genetically transmitted disorders, the stigma of transmission to one's offspring. In addition, because of their increased risk of severe complications, and lowered life expectancy, diabetics are often seen as poor marriage risks. It was not uncommon to hear diabetics in the clinic comment that "it runs in my mother's family". Indeed, 68% of the diabetics had relations with diabetes. Of these, 54% had primary relations (mother, father, sibling or child) with the disorder, and 24% had a diabetic mother. Marrying a known diabetic meant that one was accepting the risk that one's children might also be diabetic. In addition, diabetic men were far more likely than non-diabetic to become impotent [22]. This problem, mentioned by some of the men in the study group, further exacerbated social isolation.

A man of 60 years commented that he ended a relation with a woman he had been living with because, as he put it, "I lost my nature and I wasn't any use to her no more". Another informant, Mr B., a Black male, was a widower. He previously had a girlfriend but because he could no longer "give service" they were no longer together. He kept to himself and "tried not to worry". He had lost his job because of diabetes, but occasionally did odd jobs. Mr E. B., another widower, was unemployed and lived alone. Diabetes had changed his sex life, he said. "My sex ain't worth a plug nickel." He said that the only reason he felt alone is because his kids did not visit him. For Mr E. W., diabetes had changed his ability to get around. "I don't believe that a diabetic lives a normal life. His sex habits changed. His eating habits changed. He feels left out when he can't eat like everyone else."

The impact of diabetes upon the self is one of the most dramatic changes. Diabetics in the study reported psychological discomfort, specifically depression because spouses did not love them as they

once had, and because friends stayed away because of their diabetes. In addition, their self-esteem was closely tied to their sense of being able to get around, to do a bit of work around the house, and to remain, in their own terms, active. Diabetes threatened this need. One woman of 75, in reporting sadly her new need to have a neighbor do grocery shopping for her and fill her insulin syringe because of failing vision, kept insisting, "I'm an independent old woman!" The alteration in her concept of self was obviously as damaging as the potential for rejection of others, or possibly of greater importance.

While being stigmatized was not the only and often not the most important stress that diabetics experienced, it often played a role in increasing levels of anxiety. Other related sources of anxiety cited by the study group included loss of income, fears of future medical problems, particularly amputations and blindness, and family problems related to diabetes. Coping with this stress frequently involved the regular use of psychotropic medications such as Valium or Elavil. Forty-five percent of the clinic population were taking some form of minor tranquilizer, known in the popular domain as "nerve pills". Use differed dramatically, however, among patients by sex and race. For example, of 272 diabetics attending clinic and using medication to regulate their diabetes, only 8% of white men and 19% of black men used these drugs. However, the figure increases dramatically for women, with 34% of black women and 53% of white women using them. The numbers for women are higher than for the population at large [23].

A 35 year old White woman commented that diabetes makes her feel nervous. "I can't live with it," she said. Taking insulin injections makes her feel "like you don't belong to the human race".

The kinds of negative life changes arising from diabetes affecting self-image may be rather distinct for women and men in certain respects. The loss of sexual potency for men, does not occur for women, although lesser problems affecting sexual relations can arise. For women, obesity becomes a dramatic source of stigma. A study of body image by sex, and presence of illness suggest that women have more negative body image in general, and respond more strongly in negative body image to illness [24].

Finally, it should be noted that the relation between stress, diabetic control, and mood changes has only recently begun to be explored [25].

ISSUES IN DIABETIC CARE AND CONTROL

The stigma that attaches itself to the poor and chronically-ill, be they diabetic or hypertensive, is often clearly indicated in the treatment of individuals in clinic situations [25]. Diabetics in this study, however, received care from medical nurse practitioners who maintained contact with patients for at least six months on average, and were able to spend more time with patients than is usual in most clinic settings. Patients visited the clinic $5\frac{1}{2}$ times annually. While many practitioners encouraged their patients and worked closely with them, less than 10% of the patient population could be considered, from the point of view of the practitioner, "compliant" with medical regimen. This meant that they followed a dia-

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betic diet, took insulin or oral medication appropriately, exercised, cared for skin and feet, and carried out urine testing [26]. The major issue of conflict was related to obesity and the failure to follow the diabetic diet. The diabetic diet was rarely adhered to by the clinic population. Among reasons given for not doing so was inability to pay for the diet, which stresses protein, fresh fruit and vegetables. Annual incomes were exceedingly low, with half of the clinic living on less than \$3000 yearly. Towards the end of the month before disability or social security checks arrived, some patients were reduced financially to eating the cheapest of foods. In addition, food preferences accounted for the failure of many diabetics to stay on their diet. While some practitioners acknowledged the financial and emotional strains involved in following the prescribed diet, it was not uncommon to hear some practitioners comment about "these people" being "incapable of complying". Other practitioners avoided all but a general discussion of food feeling that nothing could be done to alter nutritional habits. The explanation was often given that they lacked "self-control". Lack of self control was attributed to lack of intelligence, to poverty, or to lack of character.

However, one study of diabetic control concluded that the strongest association with poor diabetic control was a physiological one, the age at onset. Diabetes which begins in youth is more difficult to control. Next in order of significance in affecting poor control was psychic stress as a result of major life problems. Still another association with poor control, particularly for married men, was a larger household size [27].

From the perspective of the practitioner, the non-compliant chronically-ill patient presents one of the most frustrating work experiences. The inability to effect change in the patient's behavior and health status, often leads to a readjustment of expectations of their own professional goals. For some it guides them to the role of "counselor" with lowered expectations of change. For others it leads to "burn-out", and eventually leaving that particular work setting. For still others, it leads to a stalemate, in which conflict with patients and the work setting becomes a way of life.

For those practitioners who continue to attempt to make changes in patient behavior, several factors impede them. First is lack of training which takes account of the psychosocial problems of chronic illness, and guides the practitioner in dealing with critical issues. Second, the creative practitioner often finds that the clinic and hospital structure are inamenable to change. Third, the burdens of chronic illness coupled with the burdens of poverty are often too overwhelming for a practitioner to alter through visits lasting half an hour five times yearly.

From the western scientific perspective, diabetes is a disorder caused by an interaction between genetics and environment. Within the western scientific framework of disease causation, diabetes, at its outset lies outside the realm of human control. However, currently, the relationship between obesity and onset of diabetes, and diabetes and culture change is being investigated [28].

Discovery of a triggering link between the two would place causation of adult-onset diabetes par-

tially within the realm of human control. The interaction of diabetic care, diabetic control, and development of complications, is, however, a controversial issue. Currently, research has brought forth contradictory data regarding control of blood sugar levels and development of complications. Among diabetic practitioners, for example, are those who argue that insulin's only value is to alleviate symptoms [29]. By contrast, in a major study, certain degenerative complications associated with diabetes have been correlated with poor diabetic control [30].

For the individual diabetic the issue of self-care is problematic. A diabetic may do all the right things and still develop crippling complications. The disease has a "capricious" quality, which lies beyond the domain of human intervention. Moreover, diabetes affects individuals in different ways. One person may lose a leg, his eyesight, and die before the age of 50. Another may control his diabetes with diet and have little in the way of symptoms as he lives a "normal" life. A diabetic who does not comply with medical regime is labelled "out of control" as a statement about both his blood sugar levels and his unwillingness to take responsibility for his actions. The vast amount of research on the issue of compliance with medical regime (which is of enormous interest to both physical and social scientists alike) has been loaded with value judgements of character [31].

A variation of the "lack of character and will-power" theme has been the image of the patient as "deviant" and possibly mentally unstable. A portion of any chronically ill population can be described as mentally ill, and indeed within this study 17% were placed by their practitioners in categories such as chronic brain syndrome, schizophrenia, and alcoholism, which produced difficulty with compliance [32]. However, the figures for non-compliance in the clinic population were far greater, as has been suggested.

The failure of the health profession to effectively deliver health education to improve compliance in diabetes has been extensively researched [33]. Most daily diabetes care, except for acute episodes, has been placed in the hands of diabetics, with a variable amount of communication concerning the nature of the disease and appropriate behaviors to care for it. Among study patients, there was enormous confusion among patients concerning what to do if one experienced symptoms of "high blood sugar" as opposed to "low blood sugar". Miller *et al.* reports of an evaluative study of patients' knowledge in a Veterans' hospital, that 35% had no formal training in self-management, half of those who attended some sort of training program lacked vital information about self-care (administration of insulin, urine testing, diet, foot care, and management of hypoglycemia and hyperglycemia). Finally, they noted that patients with training were only slightly more knowledgeable than those without training [34]. The authors comment on the enormous cost of maintaining services for diabetics (who comprise the fifth most common diagnostic category) without adequate education. This includes treatment for more acute episodes than would occur if self-care were improved. The far more problematic issue of the reaction between adequate knowledge of medical regime and appropriate behavior in self-care rests to

some extent, then, upon a very shaky educational base among diabetics.

Of possibly greater importance than education is role modeling in chronic illness. While 69% of the study population had relations with diabetes, few could recall any who "took good care of themselves". The vast majority recalled relations who did not follow the diabetic diet, had difficulties with complications, and eventually, after repeated hospitalizations, died of diabetes or related factors.

Many diabetics sought each other out to discuss their diabetes in the clinic, and teaching meetings by practitioners often ended with group discussions of "stress" and how it affected their condition. The diabetics in the study belonged to no formal organizations which focused on diabetes. Low-income diabetics are far less represented within the American Diabetes Association and the Juvenile Diabetes Foundation than are middle-class diabetics. However, some low-income juvenile diabetics attend special summer camps in various states, administered through these organizations [35].

The gap between information considered crucial by the medical profession and that which is considered critical to both explain and to treat diabetes among the lay public is enormous. This kind of gap, between lay explanations and "scientific" ones is a fundamental concern of medical anthropology, and is increasingly being explored in cultures where "western scientific medicine" is the dominant system.

CONCLUSION

In conclusion, this paper has attempted to emphasize the importance of understanding the impact of physical, social, and psychological changes arising from diabetes and their potential for stigmatizing the diabetic individual. It has also suggested some links between these changes, self-care by the diabetic individual, and the patient-practitioner interaction. Improving patient care will require an assessment of the stigmatizing effects of diabetes. As a background, an understanding of the effects of the illness on different groups of people should be part of practitioner education.

The element of stigma associated with a chronic illness varies with ethnic group, and position in the life cycle as well as with socio-structural circumstances [36]. As a measure of acceptance, therefore, it is important to place the potential for stigma within the following dimensions:

- (a) explanation of causation within the ethnic group [37]
- (b) models of appropriate/inappropriate behavior in the face of illness
- (c) prevalence and severity (including physical, social, and psychological changes as discussed in this study).

This discussion has focused on lower-income diabetics receiving clinic care in the U.S. I have suggested that stigma within the group may be less severe, *vis-à-vis* the individual's role in controlling the disease than among middle-class diabetics. By contrast, however, it should also be noted that the impact of diabetes on a lower-income individual in the U.S. may be more severe, in that chronic illness in combi-

nation with the effects of poverty may more dramatically affect employment, social and family life. Diabetes, or indeed, any chronic illness, cannot be fully extracted from the total life experience, except for purposes of analysis.

The process of stigmatization among any group of diabetics reflects what Kleinman *et al.* refer to the patients' experience with "illness", the "experiences of disvalued changes in states of being and in social function" [38]. Increased sensitivity on the part of health practitioners to class, ethnic group and cultural variability is needed in treatment of an illness such as diabetes.

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COPING WITH STIGMA: LIFELONG ADAPTATION OF DEAF PEOPLE*

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Abstract—The author studied 200 deaf people in the San Francisco Bay Area over the age of 60 who communicate in American Sign Language. The findings indicate that deaf identity and the development of a social support system are two factors that intervene positively in the management of stigma. Coping mechanisms that build on these factors enable aged deaf people to adapt to both their disability and to old age.

INTRODUCTION

Mrs Simpson [1] was sitting in her small, cluttered apartment in senior citizen housing, relating the story of her life. Suddenly, she became agitated, jumped up, and enacted a drama from her childhood.

I was playing in the school yard with some other girls and a boy came along. He pointed at me. "Deafy," he screamed. "Deaf and dumb," and he threw something like acid in my face. It was a terrible day in my life. Why should he hate me just because I am deaf?

Stigma is a universal phenomenon. In every society certain conditions are stigmatized, whether they are based on physical "blemishes," or on behaviour that deviates from the norm [2]. Societies develop negative attitudes in response to the stigmatizing condition. Individuals with such a blemish or behaviour quickly become aware of the way others view them. The stigmatized individual must struggle with these negative attitudes and with the devalued status that accompanies them and develop strategies for handling the stigma. The individual who fails to do this cannot function adequately. In American society, failure to learn coping skills often results in institutionalization, or at best, existence on the fringes of society. When sufficient numbers of stigmatized people form a sub-society, they build coping strategies for dealing with stigma into their subculture.

This paper describes the ways in which older deaf people perceive and deal with stigma. The author studied 200 people in the San Francisco Bay Area who were born deaf or became deaf in the first few years of life. They were all over the age of 60 at the time of the study and communicated in American Sign Language. Fieldwork was conducted in sign language, utilizing traditional anthropological field techniques of participant observation and in-depth interviewing. The 200 people formed a natural group, and from this group 60 were selected for in-depth interviewing. Participant-observation activities took place wherever aged deaf people congregated—in senior citizen centers, at deaf clubs, at funerals, and in people's homes. The author did participant-observ-

tion almost daily during the one-year period of the research.

Deafness is called an invisible disability because it is only noticeable when a person attempts to communicate [3]. No visible indicators, such as the white cane of the blind person, give other people cues about what to expect in communication with a deaf person. Once the disability is known, the impact of it may be heightened [4]. Hearing people often "freeze" and withdraw from the situation or behave inappropriately. This type of behaviour is so common that Schlesinger and Meadow [5] have labeled it "shock withdrawal paralysis." Such a response to the deaf individual is in part due to the stigma attached to sign language, and is a continuous reminder to deaf people that they vary from the norm.

THE ROOTS OF STIGMA

The experience of stigma is inextricably intertwined with the condition of deafness for most deaf people and arises in the first few years of life. The great majority of aged deaf people had hearing parents with whom they were never able to satisfactorily communicate. These individuals did not begin to acquire language until they went to school at the age of five or six. The inability of parents to teach their children language and to socialize them created an emotional crisis that was exacerbated by the controversy over educational methods for deaf children. Parents faced a dilemma. They had to make a choice: whether to have their children learn the "oral" method that taught speech and lipreading, or whether to send children away to a school where they would learn sign language. One hearing parent said of this decision, "It was agonizing. My in-laws were against me. They said I just wanted to get rid of the deaf one—by sending him off to a state school. I decided it was in his best interest, but it wasn't easy to let him go."

American Sign Language was, and is, forbidden in oral schools, and its use brought punishment to the individual. In those state schools where it was used, the stigma surrounding it created a common bond among deaf children. In old age people still discuss their first awareness of being stigmatized. One woman said, "My father didn't want to send his child to an 'asylum'—it would bring shame on the family," while

* Portions of this manuscript appear in *Growing Old in Silence*. University of California Press, Berkeley, 1980.

another respondent said, "My mother dragged me out of that school—she said it was not nice to sign."

In contrast, deaf individuals in the study group who had deaf parents did not experience these conflicts. Eight percent of the deaf population have deaf parents [6], from whom they learn sign language and with whom they develop adequate communication. Meadow [7] found that such individuals have higher self-esteem than deaf people with hearing parents. Deaf people from deaf families see themselves as carrying on a cultural tradition to which little or no stigma is attached. Instead, they have a strong and positive identification that carries them through life.

American Sign Language, made up of signs, gestures, finger-spelling, facial expressions, and body language, is often embarrassing or frightening to the uninitiated. In any case, it is negatively perceived. It is distinct from English and follows different grammatical and syntactical construction [8]. Until the past few years, when sign language systems based on English were introduced, American Sign Language was the only system of manual signs in common use in the United States. Regardless of the type of education they received as children, in adulthood American Sign Language is the main means of communication for most deaf Americans.

The negative attitudes of hearing parents and the general public toward sign language creates conflict about the language for its users. One informant reported that whenever she started to leave the house to visit deaf friends, her mother said, "Oh, you're not going out with those deaf, are you?" (referring to her signing friends). The stigma attached to sign language further influenced deaf people's perspective of the world, so that they saw the world as being divided into two kinds of people: those who could hear and those who were deaf.

In adulthood deaf people demonstrate considerable ambivalence about their own language. Various informants talked to me about how sign language is "negative", making the sign with particular force. Many individuals talked about how they are "for" total communication, a recent innovative method in deaf education, because it combines sign language with speech and lipreading and is thus more acceptable. Most noticeable, however, is the way signs change in the privacy of the group. In groups of deaf people sign language becomes bigger and bolder than in public. Facial expression and body language take on new dimensions, and the richness of the language is exploited to its fullest.

IDENTITY

American Sign Language is a symbolic badge of identity in the deaf community. Identity provides the individual with a sense of self and enables him or her to relate that sense of self to the surrounding world. Clark and Kiefer [9] define identity as "that cognitive structure which gives a sense of coherence, continuity, and social relatedness to one's image of oneself". Deaf identity is crystalized early in life and is maintained throughout the life course. As individuals age, deafness defines their relationship to society.

Deaf-hearing interactions are characterized by ambiguity. Ambiguity regarding the degree of impair-

ment in disability has the most negative impact on interpersonal relationships [10]. An informant commented, "People often talk to me and I can't answer. I shake my head and point to my ear. But they don't understand—they think I'm stuck up."

Regardless of the actual quantity of interaction with either hearing or deaf people, conflict is kept alive in the person's mind by the inconsistencies between self-perception with reference to the in-group and to the outside world. A deaf man said, "It's not very nice, but have you heard the expression, 'deafy'?" As the author nodded yes, he continued, "It's sad to say, but I know people I would have to call deafies. The major characteristic of the deafy is fear of association with hearing people."

The sign, *deafy* (the thumb is put against the ear and the fingers wave back and forth), is probably the most stigmatized expression in sign language. It symbolizes negative experience in deaf-hearing interaction, and stands for deaf and dumb, in the literal sense. In talking about oneself in front of hearing people, the expression is used in several ways: (1) by highly educated people as a form of irony or sarcasm, (2) by people with minimal English language skills who are forced to convey their lack of understanding of the situation to a hearing person, and (3) to express anger and frustration at the hearing world for its construed wrongs against the deaf. For example, in a bitter denouncement of the oral method, one informant finished up with "I didn't learn anything—that's why I'm a deafy".

Early fears about the hearing world have been maintained, characterized by the fear of being seen as a deafy by the hearing world. This often leads to negative predictions about the fate of any deaf-hearing interaction. For example, a number of deaf people predicted that a program that planned to integrate deaf and hearing aged would fail. In explanation, one informant said, "Deaf don't like to be around hearing". Another informant acknowledged this attitude, and said, "Some deaf people get mad dealing with hearing people, but my attitude is just to be calm—they (hearing people) will gradually get used to it (the deafness)".

Many deaf people indeed have feelings of inferiority which they express by the elaboration of signs that connote stupidity. Sign language has a large number of signs for inferior mental ability, e.g. stupid, ignorant, pea-brain, know-nothing, and dummy. One informant demonstrated how he felt about himself when he said to the researcher, "I'm dumb... You're hearing—smart," while another informant said of herself, "Me—no voice—dumb". This perception, which correlates hearing with intelligence and deafness with dumbness, was almost universal in individuals' comments and underlines the stigmatized way individuals see themselves.

THE INFLUENCE OF COPING MECHANISMS ON SELF-ESTEEM

Deaf identity is also shaped by social factors that engender a positive sense of self. The commonality of experiences, the frequent interaction with other deaf people, and successful communication about intimate

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aspects of everyday life help develop a sense of self-esteem that grows with time.

In the process of personal development, deaf people have evolved a range of coping mechanisms to deal with stigma. The primary way they do this is a normalization process. The term "normalizing" has been used to describe the response of chronically ill and disabled people in different situations. In this context, normalizing refers to a strategy of social interaction. For example, Davis [12] uses the term to analyze the social behaviour of children with polio, while Strauss [13] discusses normalizing in terms of disease management. Normalizing is situational, and everyone experiences the need to normalize at one time or another. The concept covers a broad area of behavior. Normalization can occur within any group that is set apart by deviance or social marginality. Within the tightly knit reference group of elderly deaf that I studied the normalization process took place primarily within the group. The introduction of outsiders invites cognitive dissonance. During the initial field experience, people were reticent to talk to me. As a hearing person I was a threat to their feelings of normality. Outsiders serve as reminders (both in fact and fantasy) that the world is not necessarily the way it is perceived by the in-group. For this reason, the in-group seldom accepts outsiders who are not deaf. Even adult children of deaf parents who are native signers are on the margin of the group if they can hear.

In contrast, interaction within the in-group enhances feelings of normality, reinforces positive feelings about one's abilities and validates one's worth. An informant said, "At the suggestion of the minister, my parents finally sent me to the state school when I was 18 to learn sign language. I made a lot of friends there and it made me realize how lonely and friendless my childhood had been". He began to socialize with deaf people, going to the Deaf Club and to social events at the state school. After dating a number of deaf women, he met his wife-to-be. She had grown up in state schools and had an extensive network of friends from childhood. When they married, he was included in this social network and developed his own friendships within the group. As the years passed, he took on leadership responsibilities in the church and deaf social organizations in which he and his wife were members. His interactions with hearing people were gradually reduced, and when he retired, his social life with hearing people ended.

This story records a typical reaction to the difficulties inherent in deaf-hearing relationships. Once the individual has begun to reconcile the dilemma of trying to function as a hearing person and to begin to accept his or her deafness as a reality of life, he or she can devote energy formerly used in frustrating interactions to develop more fully as a person and to establish meaningful relationships with peers.

Membership in a deaf community that integrates the use of sign language and shared experience fosters self-esteem. During the course of fieldwork with the aged deaf, a pattern in the interaction of deaf people could be observed to recur. When individuals were in a group of deaf people they were talkative, confident, outgoing, and relaxed. When they were interacting with people with normal hearing, whether alone or

with only a few deaf people present, they became quiet and hesitant. Thus, their self-perceptions shaped two different kinds of behavior, one convivial, sociable, and gregarious, the other wary, timorous, and withdrawn. This dichotomy in their behaviour reflects the ultimate ways in which they have adapted to their disability, and softened the effects of stigmatizing situations.

VALUES AND SOCIAL BEHAVIOR

Among the aged deaf I studied, being deaf is the single most important factor in their lives. One owes allegiance to deafness because of early communication problems where individuals could communicate only with peers. One must further the good of the community, putting it before oneself, if necessary. Conformity to a group norm serves important functions, especially for those who must continuously deal with their own nonconformity. Conformity decreases feelings of deviance and, at the same time, heightens feelings of belongingness, a process that occurs both consciously and unconsciously. This process is related to deviance disavowal. Davis [14] used this term in discussing the response of nonstigmatized individuals' behavior toward the stigmatized. As part of the normalization process, however, the aged deaf dissociate themselves from others who suffer from a different social stigma: ethnic and racial minorities, the socially deviant, and those with other disabilities. For example, after stating that her hearing niece had been hospitalized in a mental institution, one woman added quickly, "But I never see her. I don't have anything to do with her".

In the process of normalization, symbols of stigma undergo a transformation in which the negative aspects of the symbol become a means of self-affirmation. One example is the single sign for "I love you". This has become a much-used symbol in the 1970's—in greeting one another, in speeches, on bumper stickers, and in graphics intended to educate the hearing world about deafness. The sign originated in the California School for the Deaf some 40 years ago when the school used the oral method and signing was prohibited. Students would arrange their fingers in the sign configuration and walk down the hall, dangling a hand casually at their side or holding it against their books [15]. Through this maneuver the students demonstrated deaf solidarity against a hearing world. The sign has thus undergone a profound transformation. The stigmatized origin of the sign has been forgotten, and it has become a powerful symbol of unity and affection that is now used by deaf people all over the United States.

CONCLUSION

In efforts to counteract what Goffman [16] refers to as spoiled identity, and to develop as individuals, aged deaf people have lived their lives on two levels: (1) the superficial interactions with hearing "strangers," and (2) the intimate interactions with deaf peers. As time passes, intimate interactions become increasingly important to the self-concept. The awkward, tension-laden interaction with strangers, although they are reminders of one's deafness, become

easier to avoid as people age. By limiting the intensity and frequency of their contacts with the hearing world, elderly deaf people reduce the level of frustration with which they must live. The combination of deaf identity and a strong system of social support sustain elderly deaf people against isolation and loss of self-worth. Thus, they have created a climate that enables them to adapt to their disability.

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DWARFISM AND SOCIAL IDENTITY: SELF-HELP GROUP PARTICIPATION

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Abstract—This paper describes a specific process relating to destigmatization and social identity which is a chief dynamic operative in a self-help group for dwarfs, Little People of America. In our society persons of abnormal short stature typically experience varied forms of stigmatized and stigmatizing social interactions within the average sized world. Data are presented here from a recent study of dwarfs and their families which examined a variety of dimensions of the dwarfism experience and the impact of self-help group membership on social identity and life style. It is suggested that a cognitive restructuring of self-image occurs through the process of forced objective perception of others who share a similar physical condition. This acceptance of self-identity and the physical identification of dwarfism then allows the person to lead his/her life more happily and effectively.

INTRODUCTION

Non-professional self-help groups have long provided a social and therapeutic resource for positive reconstitution of identity for the stigmatized and alienated. The remarkable burgeoning of self-help or mutual aid groups in recent years has forced professionals to take note of these indigenous community resources, and begin to seriously evaluate their proclaimed and often obvious successes in "treatment".

Various social, psychological and, more rarely, cultural processes and properties of these groups are now being postulated by researchers in a newly developing literature [1-6]. I propose in this paper to examine one specific process relating to destigmatization and social identity which I see as a chief therapeutic dynamic operative in a self-help group for dwarfs, Little People of America. The data reported here have resulted from a recent study conducted by the author which examines a variety of dimensions of the dwarfism experience and the impact of self-help group membership on social identity and life style. The analysis presented below is based on the author's observations at meetings and social events of Little People of America over a three-year period and systematic in-depth interviews over this period with 25 Adult LPA members in a West Coast metropolitan area.

DWARFISM

Dramatic and highly variable attitudes toward people of abnormal short stature are recorded in ancient records and art forms around the world. Portraits and representations of dwarfs are found in Egyptian, Greek, Roman and Mayan and other Pre-Columbian New World Cultures. Likewise there is a rich folklore over the world detailing the adventures of mythical elfin figures. Such persons were either highly valued and placed in special roles as deities, jesters, acrobats, keepers of jewels or precious objects, or in contrast, they were discriminated against as being ill-omens or abominations [7-9].

Clinical definitions of dwarfism include persons 4'10" and under. There are more than 100 types of dwarfism differing in etiology and physical characteristics. Estimates of the number of dwarfs in the United States range from 20,000 to 100,000 [10, 11]. A common form of dwarfism and the most numerous in the membership of Little People of America are achondroplastic dwarfs, persons of disproportionate body build, i.e. with an average sized head and torso and unusually short arms and legs [12]. Achondroplastic dwarfs typically have expectations for normal intelligence, and although some individuals experience leg and back problems which may require repeated surgeries, achondroplastics generally are able to engage in the same range of occupations as average sized persons [13]. The barriers to normative lifestyle expectations which exist for most dwarfs are in the main social, rather than logistic. Special stools, automobile extenders and other physical devices allow most little people to work and recreate in the same modes as the average sized population. However, attitudes of potential employers, school and workmates, and the general public often serve to set dwarfs apart as distinct kinds of functioning persons and to create expectations for lower or special levels of performance and general ability than are true for other people.

The clinical complexities of abnormal short stature have been widely explored in the medical literature with emphasis given to endocrine and orthopedic concerns. In contrast, the literature dealing with the psycho-social dimensions of short stature is relatively meager. Most reports summarize observations made or results of psychological tests of patients, ordinarily children, in various hospital or clinical caseloads. It is difficult to generalize from these studies because they report on discrete types of short statured persons with each population exhibiting very different physiognomies and accompanying health expectations. For example, hypopituitary dwarfs, commonly called "midgets" [14], may benefit from growth hormone treatment, and achieve normal or near normal height, while most dwarfs cannot expect medical knowledge

or assistance to increase their stature. Hypopituitary dwarfs are of proportionate body build, and while they may often be taken for persons younger than their age, they do not differ greatly from the average sized population in appearance. In contrast, achondroplastic dwarfs are readily identifiable. In accordance with these realities the social stimulus value of differing types of dwarfism must be taken into account. The daily life experiences which may have determined specific features of personal identity for most dwarfs, whatever their physical type, have not been chronicled. The reader is directed to Weiss for an overview of the existing literature [15].

Most physicians know very little about the physical, psychological or social complexities of dwarfism. Interviews reflect, in fact, that clinicians have significantly contributed to the psycho-social problems of their patients and families. Often the most traumatic aspects of the birth and development of a dwarf child have been related to doctors' ill advised and even tactless statements to the family. Expert clinical and social resource referrals were rarely given. Had families been provided with realistic expectations for their children's development and career potential, in most cases parents would have been saved from considerable grief and worry. Significantly those families who at the earliest instance following birth were referred to the Parents Group of Little People of America have had the most successful adjustment in dealing with their own feelings and the physical and social problems of their child.

DWARFISM AS A STIGMATIZED CONDITION

Dwarfism characteristically has constituted an irremedial and stigmatized condition in American society where abundance of size and quantity in most aspects of life is highly prized. The condition of profound abnormal short stature can in only a small proportion of cases be corrected. Likewise, the daily problems of life caused by a ridiculing social milieu scarcely can be prevented by professionals. The psychosocial impact of the birth of a dwarf child may ricochet throughout family and community life, and the implications for the total family and its internal and external relationships may be marked and often serious. Problems and coping patterns of individuals and family members vary, but most dwarfs have shared the same generalized painful kinds of stigmatized and stigmatizing experiences, whatever their socioeconomic backgrounds.

Goffman [16] in his classic work, *Stigma*, has carefully outlined the characteristics and processes of social stigmatization. Says Goffman:

Society establishes the means of categorizing persons and the complement of attributes felt to be ordinary and natural for the members of each of these categories... While the stranger is present before us, evidence can arise of his possessing an attribute that makes him different from others in the category of persons available for him to be, and of a less desirable kind—in the extreme a person who is quite thoroughly bad, or dangerous, or weak. He is thus reduced in our minds from a whole and usual person to a tainted, discounted one. Such an attitude is a stigma, especially when its discrediting effect is very extensive; sometimes it is also called a failing, a shortcoming, a handicap" [17].

While most conditions which constitute stigmas in American society are ones which make their presence known gradually or accidentally through conversation or increasing acquaintance, dwarfism in most cases is an immediately apparent condition with a dramatic negative social stimulus value. The first identity characteristically projected is "dwarf". All others follow. This immediate apparency of the condition is the crucial element for the discussion which follows.

LITTLE PEOPLE OF AMERICA

Little People of America, Inc. was founded by a Hollywood entertainer, Billy Barty, in the late 1950's and the organization was formally incorporated in 1961. Little People of America today has a national membership of about 3000 persons, composed of dwarfs and their families, and holds regular meetings on national, district and local levels. Members represent all socio-economic categories, educational backgrounds, and occupations. Weinberg [18] to date has provided the most complete description of the organization and its goals and functions. Only in recent years has this group become known to the general public or even to professionals who increasingly have come to use it as a very valuable referral resource.

Little People of America sponsors many types of activities and serves a great variety of purposes for its members. The by-laws state that "The purpose of LPA is to assist its members in adjusting to the social and physical problems of life caused by their small stature through mutual assistance and the personal examples by each of its members". The by-laws further note that LPA was organized by a concern with "the need for people of small stature to become useful members of society through education, employment, and social adjustment, and to focus public attention to the fact that the magnitude of any physical limitation is a function of attitude of both the small and the average-size person" [19]. The varied functions of LPA and the energetic character of the organization are most in evidence at the annual conventions where hundreds of dwarfs and their families convene for social and recreational activities, workshops on varied topics, and medical examinations and consultations by specialists from Johns Hopkins Hospital and other institutions over the country with particular interests in problems of growth and related areas.

The format and nature of local or chapter LPA activities differ in significant ways from those of many other mutual aid groups where members share a specific health-related problematic condition. Perhaps one of the most significant differences is that in local LPA gatherings there are no direct discussions of the physical nature of the short stature shared by members nor is there any formal or ritualized relating of members' painful personal experiences connected with the condition. Regular LPA meetings are structured business meetings with a social hour following. Picnics or holiday events likewise are forthright social occasions. The activities constitute a coming together of persons from very different socio-economic statuses and professions who share one highly significant physical condition. They then return to their own

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divergent worlds, worlds common only in that they are constituted by average sized persons. It should be noted that despite the differences in socio-economic background, all members to a greater or lesser degree bring a history of social disenfranchisement because of their short stature.

On the face of it, the social dimension of LPA is the most significant for members. Besides the opportunity for immediate social interaction and recreational events, is the expectation that members might meet potential spouses through the organization. This aspect is highlighted at the national conventions at which time there is an urgency to take the most advantage of a field of potential mates of small stature [20]. Indeed almost all married persons in my sample met their spouses at annual conventions. Most informants regard LPA as primarily a social club. However, given the prejudices against physical difference in this society, the social dimension of LPA typically offers members their first and perhaps *only* opportunity for dating or marriage. Thus LPA may offer the primary avenue to a chief ingredient for healthy identity formation, the establishment of an intimate relationship, which is an ultimate validation of self-worth for many. The therapeutic value of this type of social opportunity appears to be substantial, according to members' accounts of their experiences at conventions.

Caplan and Killilea [21] present the fullest overview of the varied characteristics and dynamics postulated for self-help groups by researchers. They list more than 20. Of chief importance for an understanding of LPA are those dynamics which relate to (1) some form of declaration of one's deviance and status to oneself, the group, and sometimes to the public [22], (2) the exchange of practical strategies and coping mechanisms by peers who share painful and specialized knowledge of their own or their children's or relatives' unique condition [23, 24], and (3) the crucial provision of a meaningful arena for specialized social experimentation and relating. The latter function has not been carefully studied for its ramifications. While these three dynamics are all operative to some degree in LPA, I will focus in this paper on one *major* process, an aspect of (1) above, which serves to stimulate personal awareness and enhance the social functioning of LPA members. This process addresses the resistance most little people have had toward self-acceptance of being a dwarf and thus irremediably and markedly different from the cosmetic prescriptions of American society.

THE RECONSTRUCTION OF STIGMATIZED IDENTITY

Persons who fit in the categories of membership for many mutual aid groups frequently share stigmatized identities. Sagarin [25] focused on the characteristic of deviance as the chief ingredient of need for such groups, among which he numbered LPA. And, in fact, many self-help groups may function as much to allay the shame and sometimes guilt of members resulting from their stigmatized status, as to assist them in changing or resolving their particular presenting problems. Thus the group's belief system and activities may serve to both legitimize the member's par-

ticular identity or situation in his own mind, and also to legitimize the condition to society at large. Some groups promote educational activities to change public attitudes, while others sponsor social and political campaigns to change laws and practices in regard to those who exhibit or share the condition.

The author has described elsewhere how introspection and behavioral change come about in Al-Anon Family Groups, a self-help organization composed of families and friends of alcoholics, through conversational sharing of alternative strategies for coping with common problems [26]. In LPA there appears to be a unique mode of cognitive restructuring brought about not by an exchange of shared experiences, but by a literal *reality* perception process involving simply the *viewing* of peers and confronting the similarity of their physical structure. Some persons will never attempt the challenge of this confrontation; others cannot tolerate it and drop out of the group for this reason.

THE CONFRONTATION OF LPA

Many achondroplastic informants tell of how they physically and psychologically actually avoided looking at themselves or other little people before coming to LPA—a form of classic personal disavowal of physical deviance [27]. When they did see another little person, they disassociated themselves from any similarity to that appearance. Wright has vividly described this as “as if” behavior in a discussion of the physically disabled:

In the effort to adjust, the person commonly tries to conceal his disability—and for understandable reasons. The person typically views his disability as does the normal majority. If it is taken for granted that a disability is something to be ashamed of, the obvious way to eliminate shame is to eliminate the fact of disability. Where this can be realistically accomplished through surgical and other therapeutic procedures, the person will feel relieved, and objectively he may effect a change from the handicapped to the nonhandicapped position. Where this cannot be accomplished, however, the person will attempt to hide, forget, or even deny what to him is a deficiency. . . . The person may even succeed in denying painful facts to himself. The psychoanalytic literature on repression leaves no doubt that the escape forces may be so strong as to alter one's memory and perception of the unacceptable [28].

For example, said one informant:

“For years I couldn't look in mirrors. I had one in my room but I didn't look in it. And you know how when you're downtown you look in windows as you go by and see your reflection? I never did. I just kept saying, ‘Well, I'm little,’ but I never could quite say ‘I'm a dwarf’.”

Or another:

“You've never really accepted yourself until you have looked in the mirror and said ‘I'm a dwarf’. A lot of people never come to this”.

Or another:

“If I saw another little person, I'd go around the block.”
[Why was that?]

“Because I saw myself. I just didn't want to look at that. I couldn't stand to look at myself. Because I wasn't a dwarf (sarcastically), I just had rickets.”

And another:

"It is so hard to go and see yourself. You can't ever see yourself or understand yourself until you see other little people. The first time I saw a little person was in the 10th grade or so. I saw this old woman on the street and thought, I don't look like that. That's not me. But then I said, 'you do look like that'. Until you see other little people, you can't understand yourself. That's why people are afraid to do that, because they see themselves in others."

Or another:

"I was a dues paying member of LPA for two years, although I did not go to any meetings. I wasn't ready for that. In fact, I was beginning to get it together by that time and I knew that some day I'd have to face it—if I saw any other little people, I'd have to respond to them."

Thus when one finally decides or is coerced by other little people to attend a meeting the first shock of seeing a roomful of other dwarfs can be a devastating event.

Said one member:

"It was really very strange. I couldn't conceive of all those people. I'd look at them and say, 'I don't look like that! They're not like me!' You know how when you watch a little person get up on a sofa, the way they have to push themselves back—I watched the way people sat down; they were pushing themselves back and I was thinking, 'I'm not like this. I don't have to do that—the way they walk and the things they do.' I didn't realize that that's exactly what I did. It really was sort of strange."

Stated another:

"Then I went to that meeting and there were all these little people. I looked at them and thought, 'I'm not little like that. I'm just not a little person like that.' I really had to come to terms with it, that I was a little person like that. After the first meeting the other meetings weren't so frightening."

It would appear that for members for whom LPA is a truly successful experience for self validation, this shock precipitates the process of accomplishing a *cognitive restructuring* of the self image—the acceptance of self-identity and physical identification of being a dwarf—deviance *avowal*—and from this may follow a successful benefiting from the varied dimensions of social interaction and the sharing of logistical and medical strategies in LPA. But perhaps, even more significant are the implications for freeing the person in his/her total interaction in the average sized world—to experience life on all levels more casually and happily. This process constitutes in essence a personal dress rehearsal for the rituals of normalization that have been described painstakingly by Davis [29] and Goffman [30] which are carried out by average sized persons in relating to dwarfs or others defined as physically or socially deviant. This dress rehearsal provides the beginning of self acceptance for the dwarf who by not accepting himself, may not be able to allow the process to occur by others in relation to him.

Most members explicitly tend to state this process as the chief benefit they have gotten from LPA.

"I had to look at myself. That's what I got from LPA. I had to look at myself and look at other people, and realize

that I'm a dwarf. That's all there is to it. I realized I'm a dwarf, and this is the way I am. This is the way it's going to be and I'm just going to have to make the best of it. I can't change it. That's what the group has done for me. It really has helped me."

Or another:

"I saw myself—I learned about myself physically, and I learned about myself because I could see other little people like me."

And another:

"I can't believe that any little person can have a healthy image of themselves or be a healthy personality unless they join LPA. You don't see yourself as a little person. You have to relate to yourself as a little person by relating to other little people."

While some members would not share this latter exclusive position, most would state that their participation in LPA has in a special way significantly contributed to their social development.

The phenomenon described here is a peculiar yet specific example of the construction or, here, reconstruction of identity and attitudes toward the self through interaction with others. The process was described by Cooley [31] in one of the earliest writings of the symbolic interactionists.

"A social self of this sort might be called the reflected or looking-glass self;

"Each to each a looking glass Reflects the other that doth pass."

Said Cooley:

"As we see our face, figure and dress in the glass, and are interested in them because they are ours, and pleased or otherwise with them according as they do or do not answer to what we should like them to be; so in imagination we perceive in another's mind some thought of our appearance, manners, aims, deeds, character, friends, and so on, and are variously affected by it" [31].

Now, while Cooley used a metaphor *within* a metaphor—the likening of our imagination of the attitudes of others towards us as the reflection of a mirror—creating our definition of what we are—the literal reality perception process in LPA presents a metaphor so real that it may be not a metaphor at all—seeing oneself *directly* in the physical person of other dwarfs. This is graphically illustrated through the words of one informant.

"When you go to a meeting, I can't tell you how shocking it is—it's just like looking at a lot of mirrors and seeing these people like yourself. I think it's made me look at myself more realistically. When you go in and you see all these people you know you're looking at yourself. Everytime I look at Z, I see myself there. I see her walking and I see the way she is. I see how other people are looking at her. And I know how they're looking at me."

The rapidity of restructuring of identity that appears to follow is an unusual process in identity development or redevelopment. Psychologists have noted that resistance to positive change is strong in such instances of long-standing denial of personal features. For example Wright states:

The resistance against positive change in the self-concept is especially interesting since it runs counter to what would

seem to be the wishes of the person. Would not everyone rather feel better about himself? The resistance, however, is simply one of the consequences of the integrating process. Once self-abnegation involving the total person has taken place, then the old and new events tend to be interpreted in harmony with a negative self-concept.... The therapeutic problem involves identifying the worthy aspects of the upsetting characteristic in question, of giving them sufficient weight to effect a change in self-concept and of re-integrating the negative features accordingly [32].

The varied symbolic nuances of the declaration of new members of self-help groups acknowledging that they share the condition of the group have been subjects of exploration by researchers [33, 34]. Yet, while the act of identification of the individual as a dwarf may appear *akin* to the in-group declaration of the alcoholic in Alcoholics Anonymous or the gambler in Gamblers Anonymous, that is—"My name is John. I am an alcoholic," it differs in two important respects: (1) After the alcoholic *accepts* his identity as an alcoholic, his task is to then change his behavior in regard to his alcoholism, thus acknowledged. In contrast, for the little person, his task is to then get on with living the same life, but more happily and effectively. (2) Secondly, this semi-public declaration does not necessarily bond him affectively into a community as is true of AA and other groups. Dupont [35] for example has emphasized the social consequences of the alcoholic declaration which commits the member to a new community of support:

"The statement, 'I am an alcoholic,' or 'I am a junkie' or 'I am obese' conveys not merely repentance and a desire for change but a rite of passage to a new community which magically and tacitly infuses identity and pride" [36].

For the dwarf, the acceptance of this identity does *not* necessarily bind him so emotionally to the group. Indeed there is little of the intense and even quasi-religious personal dedication of members to LPA as an organization that one finds in members of AA or other groups to which Dupont refers, and much less of the specialized form of automatically *caring* for other members simply by virtue of their membership that the researcher or even casual observer can feel in some other self-help groups. This relative absence of intense interpersonal involvement with others may be explained at least in part by the fact that the significant identification resulting from the acceptance of one's own appearance, is an identification with a category—that of dwarf—not with any one person or group of persons. Once the therapeutic work—the major process—has occurred or is occurring, there is much less need to relate to others for one's salvation. The member's new found insights deal with his personal self, not with a shared behavior, thus the more important social context for experiencing these changes is his everyday world. Members touch at events—seemingly briefly, yet intensely and symbolically—and then return to their own worlds to operationalize new-found insights.

SUMMARY

A process of redefinition of identity which occurs through a literal reality perception heretofore not examined in the literature has been described. In con-

trast to the chief dynamics operative in many other groups, the major cognitive restructuring in LPA does *not* come through watching successful models cope or offer strategies or advice or through internalization of a new positive ideology about their condition. It occurs through a straight forward, but intense emotionally-laden process of recognizing and accepting one's own appearance through a forced objective perception of others who share a similar physical condition. I suggest that this process is the primary and crucial one for new members. The effectiveness of other processes operative in the group is dependent on this initial acceptance of self.

This paper has described a peculiar process occurring within a non-professional mutual aid group for dwarfism—a condition for which the medical profession is very limited in its potential for "cure" or treatment. It is appropriate that professionals encourage and take heed of the nature of non-professional and peer-support systems which can aid in "healing" a variety of non-medical aspects of a disability by destigmatizing the person, and enhancing his self-image. This study suggests that a diversity of models for self-help may be postulated through the examination of specific differing peer-support groups. The elements of these models may vary in accordance with the presenting problems and adhering difficulties which members bring and which have shaped their personalities and their lives.

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12. Achondroplasia is a primary bone disorder which occurs in about one out of forty thousand births. It is found in both males and females and in all races. Adult male achondroplastic dwarfs average 51.8 inches in height, while females average 48.6 inches. Achondro-

- lasia is caused by a genetic mutation in one parent, and may then continue to be an inherited condition. In a situation where one parent is achondroplastic there is a 50% chance of an achondroplastic birth. If both parents are achondroplastic there is a 75% probability of achondroplasia in any birth. Delivery is always by Caesarean section. Information from *Achondroplasia*. Human Growth Foundation, Maryland Academy of Science Building, 7 W. Mulberry St, Baltimore, MD 21201, U.S.A.
13. Most dwarfs prefer the usage of "average" rather than "normal" when comparatively referring to the stature and proportions of individuals in the general population.
 14. "Midget" is regarded by many little people as a derogatory label, reported by informants to be related to the stereotype of "midget" performers in the circus or entertainment worlds, professions still commonly though inaccurately attributed to a large number of dwarfs.
 15. *Ibid.*
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ADJUSTMENT TO VISIBLE STIGMA: THE CASE OF THE SEVERELY BURNED

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Abstract—A study of 89 young adults who suffered a severe burn injury in childhood was undertaken to assess their psychosocial adjustment to this devastating injury which usually results in visible scarring. The sample consisted of 41 males and 48 females ages 16–28 who were 4–23 years post-burn, with a mean body surface burn of 27% (2–89%). Results indicate that most of these subjects had made a positive adjustment to their injury, as measured by three categories of adjustment: (1) social integration, (2) emotional adjustment and (3) self-esteem. From the analysis of social integration, it was found that the subject population did not differ substantially from the general population in terms of marital status, education, occupation or participation in community and leisure time activities. Analysis of emotional adjustment indicated that the subjects who were able to accept themselves and put their experience in perspective with their worldview had made a positive emotional adjustment. Self-esteem scores were comparable to established norms and were not statistically related to sex, age at date of the burn injury, total body surface area burned, body areas burned or the time since the burn injury. Only present age showed a statistically significant relationship to self-esteem, the meaning of which is questionable. This study concludes that victims of severe burns can and do make a positive adjustment to their injury and that the resulting outcome is not influenced by physical variables relating to the severity of the burn or variables relating to age and sex. Further research will investigate aspects of the burn victim's social support system and individual coping ability in relation to adjustment to severe burns.

INTRODUCTION

In the American Heritage Dictionary of the English Language the definition of the word "stigma" is "a mark burned into the skin of a criminal or slave; a brand". To "stigmatize" is defined as "to characterize or brand as disgraceful or ignominious" [1]. "Stigma" is a strong word, referring to a painful, disfiguring mark which sets people aside from the "usual". As such, it is particularly suited to refer to a person who has suffered a severe burn injury.

Severe burns can be defined as any second or third degree burn of 10% of the body surface. Second degree burns include those which extend into the second, or dermal, layer of the skin and will heal spontaneously. Third degree burns extend through all the three layers of the skin and require skin grafting. All deep second degree and third degree burns leave permanent scars. Without proper aftercare burn scars can become extremely disfiguring due to hypertrophy, or buildup of the scar tissue which continues to grow after the wound is closed. In addition, the contractile properties in the scar itself can cause crippling contractures across joints, leading to deformities and disability [2–5]. A very deep burn can also result in the loss of toes and fingers and even limbs, as well as facial features. Unfortunately, the best of plastic surgery cannot restore the losses to their pre-burn condition. The best that can be hoped for is flat scars and normal joint function and an approximation of normal facial features, which leaves much to be desired. Burn scars are forever, as can be seen in Figs 1 and 2.

A body of sociological literature has been devoted to the effect of stigma on human behavior. Goffman [6–8] in particular has characterized the stigmatized individual as having a distinctive social role, a way of interacting with the larger society which differs in

some way from the usual. He recognizes the reciprocal character of this interaction in that the larger society has particular ways of reacting to and interacting with stigmatized individuals. The emphasis is on the self-reinforcing system of behavior where the "difference" which an individual exhibits is perceived and reacted to by individuals in the larger society. They in turn interact in a particular way, which reinforces the stigmatized individual's perception of himself as different. Rehabilitation literature has also addressed the problem of how the individual who has some sort of disability, either congenital or traumatic, copes with that "difference" in his or her interactions with the larger society, and how the larger society reacts to that difference [9–15].

Individuals who have suffered a severe burn injury, with proper aftercare, rarely suffer from a permanent functional disability. When they do, it is usually due to the loss of digits on the hands. Because of the characteristics of the burn scar, however, they do have a permanent visible deformity. Unless the burn victim is a very young infant, these scars represent a significant traumatic change in a person's body, and as such, require a major emotional adjustment.

The development of an individual's "self concept" is central in literature on child development [16–26]. "Self concept" can be defined as an internal conception of the self which is based largely on other people's reaction toward one's outward self. "Body image" is a central part of the "self concept" and consists of a person's feeling about his body. It, in turn, is partially based on how other people react to it. In a young child's development of "body image" and the larger "self concept", reactions of parents are the most significant; later in adolescence and adulthood the reactions of peers become more significant. Through-



Fig. 1. Badly burned face before and after extensive reconstructive surgery.

out an individual's life, there is a continuous process of reassessment of self, including body image, based on a person's life stage and experience.

When a person suffers a traumatic injury to the body which results in a significant, permanent change—such as a severe burn injury—this reassessment of self is central to the adjustment process. In a very real sense, the burn victim is adjusting to the loss of his or her "old self". Where significant facial disfigurement is present, this loss is particularly acute. Since the face is generally recognized as the most significant part of the body for the communication of emotions and for recognition by others, facial disfigurement requires the most change in "body image" and "self concept" [27-32].

Indeed, one may look in the mirror after having been severely burned and not recognize the image. Not only do strangers react with curiosity and sometimes with horror and pity; family members and friends may also react this way. It is no wonder that a person may even react this way to his own image.

Outwardly at least, he has become a stranger to himself.

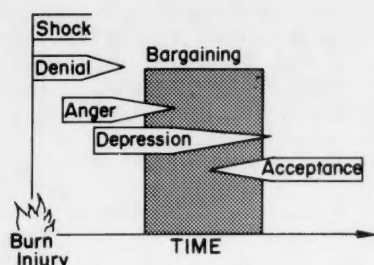
In order to make a positive adjustment to disfigurement it is necessary to go through a process of reintegration of the changed body with the internal conception of self. This process represents an emotional adjustment to loss which appears to be a normal part of the human condition. Kubler-Ross [33], in her work with dying patients, has called this process of adjustment to loss of self a "grief reaction". She has identified six overlapping stages, which are represented in Table 1: (1) shock, (2) denial, (3) anger, (4) depression, (5) bargaining, and finally (6) acceptance.

Although these stages theoretically appear to occur in these six linear stages, the process may recur several times or may even occur in a somewhat different order. A person's age and life stage may also influence the intensity with which the emotions in any one of the stages may be expressed. Vanderpool [34], for instance, has recognized that anger appears to be more common among persons who have to face their



Fig. 2. Badly burned hands before and after reconstructive surgery.

Table 1.



own death in young adulthood, the prime of life, as opposed to older people.

Others have recognized that his process occurs not only in the face of death, but after any significant loss, such as divorce, amputation, functional loss and disfigurement [9, 11, 35-40]. Bernstein [28], in particular, has identified the grief reaction in children's adjustment to a severe burn injury.

Another important emotion which is part of the process of adjustment to loss is guilt. Guilt has been recognized as being significant in parents' reaction to congenital deformities and chronic or life threatening illnesses in their children [41-44]. Guilt also appears to be a significant factor in the victim's own adjustment process. Bernstein [28] has recognized that guilt is a very common reaction to burn injury, both among burned children and in the parent's reaction to the child's burn injury.

The author has noted that in her six years of clinical experience in the counseling of burned children and their families it appears that parents always express guilt about their child's injury, whether or not they had any direct role in the accident. They feel that they have somehow failed in their role as protector of their child, since they can always think of things they could have done differently which would have prevented the accident.

These same parents usually ask themselves "why me?", "why my child?", "why now?", questions to which the answers are often religious or metaphysical. Some interpret the accident as a punishment or a warning from God. Other interpret it as a test of faith, or a way of bringing the family closer together. A smaller proportion interpret the accident as a chance occurrence. Guilt about the accident and the feeling of being punished are also common among burned children.

There has been very little systematic research to date on long term adjustment to severe burns, either with adults or children. With the proliferation of burn units and burn centers during the past five years, and with the advances in burn treatment, there are more and more survivors of severe burn injuries. Although national statistics on burn injuries are not being systematically collected, data from the National Burn Exchange collected from 32 burn units over the past three years indicate that mortality from burns is decreasing [45]. At the Shriners Burns Institute in Galveston, the mortality rate has dropped significantly in the past three years to a low of 3% in 1977. In 1978, three children with burns covering over 90% of the body survived at the Burns Institute.

Since survival is now the most common outcome of severe burns, it is necessary to explore the problems in rehabilitation which burn patients face. Published studies to date indicate that it is common for both adults and children to suffer from long term psychological problems as a result of the burn injury. Severe depression and withdrawal from normal social interaction have been recognized as common responses by several authors [28, 46-49]. Ronnebeck [50] and Schmitt [51], however, found that teenagers suffering facial disfigurement due to burn injuries did not have serious adjustment problems, although they were somewhat less likely to go into new social situations than their unburned controls. Ablon [52], in her study of burn victims in a Samoan community on the West Coast, in which a devastating fire resulted in both a large number of deaths and survivors, found that these burn victims did not appear to have significant adjustment problems. She suggested that the strong social support system both in the family and the Samoan community at large, strong religious beliefs, and the fact that this was a shared experience may have influenced the psychosocial adjustment of these burn victims.

In sum, literature on the subject is sparse and somewhat contradictory. The seeming conflict between the findings cited above points out the need for systematic research on large enough populations to make statistical analysis of multiple variables possible. The age and developmental stage of the victim, the extent and location of the burn injury, and the resulting cosmetic and functional impact as well as such background variables as pre-burn sociological, psychological, and cultural differences would appear to be important in assessing adjustment to a severe burn injury.

THE STUDY

In order to gain a better understanding of long term adjustment to childhood burn injuries, a retrospective study of adjustment has been undertaken at the Shriners Burns Institute in Galveston, Texas. This research facility, which is supported by the Shriners of North America, along with its other hospitals for crippled children, has provided free care for severely burned children since 1967. It has treated a total of 2898 patients over the past 12 years. Treatment is provided for children from birth through age 16 and includes both acute and reconstructive treatment as well as outpatient followup. Most patients who are treated at the Institute are followed for a number of years, since ongoing reconstructive plastic surgery is usually required for severe burn injuries [3, 4]. Each patient is sponsored by a local Shrine Temple in the child's home community. They provide financial support during the acute treatment as well as for trips back to Galveston for outpatient follow-up and reconstructive surgery until the child is seventeen. Because of this type of support, outpatient and reconstructive follow-up care at this facility is excellent. The average length of follow-up for patients treated at the Institute is about 5 years. This type of follow-up has meant that a personal relationship is established with the child and his or her family and with the local Shriners, making it possible to keep in contact with

patients over a long period, even after the patients have been discharged from the program at age 17.

The Study population

The present study focuses on a group of 130 ex-patients who have been discharged from the Shriners program since it began in 1967.

All those former patients who were United States citizens and who had experienced a minimum of two reconstructive admissions were included in the study population. Since only 40% of this population was from the state of Texas—the rest being from the southern states and states west of the Mississippi River—it was not feasible to interview the subjects face-to-face and intensive telephone interviews were prohibitively expensive. It was also thought by the investigator that written questionnaires would be preferable to telephone interviews since narrative questions were included which would probably require considerable thought to answer.

Data on each subject's age, sex, date of burn accident, number of reconstructive surgeries, physical condition in terms of scarring and functional disability were gathered from the subject's medical records. Assessment of physical condition at the time of discharge from the Shrine program was done from the latest photographs in the patient's medical record.

Assessment of scarring was done using the concept of "cosmetic impact" which was an assessment of the amount of disfigurement resulting from the burn injury. Cosmetic impact was assessed along a four point continuum: (1) none, (2) minimal, (3) moderate, and (4) severe, for each body part. "None" was defined as no visible scarring. "Minimal" was defined as slight differences in skin color or texture and a smooth scar. "Moderate" was defined as a definite change in skin texture and/or color. "Severe" was defined as extreme differences in texture or color when compared with normal skin and/or the loss of body parts, such as digits or facial features.

Assessment of cosmetic impact was made by a team consisting of the principal investigator, two research assistants, and an occupational therapist who specializes in burn care. Functional disability was assessed by a team including two research assistants and a physical therapist who was an expert on burns, using data from the written medical record as well as photographs. Functional disability was coded as present or absent for each body part. Both assessments of cosmetic impact and physical disability were done by consensus vote based on shared clinical experience. Little difficulty was encountered in the coding of physical disabilities. The coding of cosmetic impact was somewhat more difficult. Although there was good consensus within the team, further research on the cosmetic impact scars on members of society who are inexperienced with burns is needed in order to obtain a measure which is more representative of society's reaction to the burn victim. The consensus of the team was that we probably underestimated the severity of cosmetic impact compared to people who had not seen burn scars.

In most cases, the assessments of scarring and physical disabilities were made from photographs taken during the patient's last admission to the hospital. Since a small proportion of these photos did not

show the total body areas which had been burned, the assessment team extrapolated from the latest photos where the areas were shown. By comparing them with the subject's latest photographs of particular body parts, the extent of change in the scars in overlapping areas was noted and the areas not shown were coded as being similar to the areas which were shown. Two physicians familiar with burn care verified this technique and reported that photographs were not taken of body parts which did not need further reconstructive surgery. They agreed that this usually meant that the scars were flat, near the individual's normal skin color and not contracted, or could not be improved by further surgery.

It was hoped that data on the subject's pre-burn adjustment and family environment at the time of the burn would be available from the subject's medical and/or Social Service records. Unfortunately, these data were inconsistently kept during the early years of the hospital's existence when most of these patients were admitted. Therefore, the inclusion of these types of data was not feasible. Since the questionnaires being sent in the current study were already long, it was felt that it was not practical to include any more questions about their pre-burn experience. Also, since many of the subjects were very young children at the time of the injury, their memory of the period before it, or even the burn injury itself, was questionable.

Of the 130 subjects identified, 109 (84%) were contacted by telephone or letter and agreed to complete the mailed questionnaires. The remaining 21 (16%) could not be located after repeated attempts to locate them through parents, schools and local Shriners. No one who was contacted by phone refused to participate in the study. To date 89 (86%) of this subsample have returned their packets. The remaining 20 (14%) who agreed to participate but have not returned their packets are presently being called and encouraged to do so. This 14% subsample of non-respondents to date did not differ substantially from the subsample of respondents in terms of age or sex, size of the burn injury or the location of the burn on the body, indications that these variables are probably not related to their current lack of response. Since one of the reasons for a non-response may be that they are not as well adjusted, every attempt is being made to contact them and encourage them to complete their questionnaires, including an offer to interview them on the telephone.

The 21 subjects who could not be located do not appear to differ from the remainder of the sample although this has not as yet been examined statistically.

Theoretical framework

The questionnaires which were sent to the study subjects were designed to measure three aspects of psychosocial adjustment: (1) *Social Integration*, (2) *Emotional Adjustment* and (3) *Self Esteem*. *Social Integration* was assessed from demographic data on residence, education, occupation, socioeconomic status, marital status, dating behavior and community and leisure time activities. These data were used to assess the subjects' participation in social networks such as the family, economic and social institutions in the community and informal networks relating to friend-

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ship and leisure time activities. Literature on stigma has suggested that people who are in some way different from the norm either tend to interact more with each other than with people who do not share their condition, or that they tend to become social isolates [6-8]. Data collected for this study on the extent and type of social interaction in which burn victims participate will be used to assess whether or not they differ from the general population in terms of their participation in society.

Emotional Adjustment was assessed from the subjects' answers to a number of open-ended questions about their reactions to being burned during various phases since the burn accident, as well as their identification of present emotional problems.

The questions asked about problems which they had encountered over time since their burn injury. They were asked if they were treated differently after the accident, how and by whom, and how they coped with it. They were also asked if they felt that they were still treated differently now. Questions were asked about what was the hardest thing to adjust to about being burned, what was the hardest time for them, and who helped them. They were also asked if they had interpreted the meaning of the burn injury in their lives and what advice they could give to other burned children which would help them adjust.

The answers to these questions were not precoded because the investigator did not want to influence the content of the answers, and because there were no clear guidelines from the literature on burn victims or other stigmatized individuals about what to expect. The answers were content analyzed by the principal investigator in consultation with other grant personnel and coded into generally related categories. Further computerized analysis of these data is planned when data collection is completed on the remaining 20 subjects who have not yet returned their questionnaires.

Self Esteem was assessed using the adult Coopersmith Self Esteem Inventory, Form C [53], with the addition of questions referring specifically to burns. Form C of the Coopersmith SEI is a 25 item inventory which was developed from a more comprehensive self esteem inventory for children. Form C was developed for ages 15 and above from a short form of the Children's SEI which was validated in relation to the long form [54]. It includes items on the general self, the social self, home/family and body image, which are scored "like me" and "unlike me". There are no separate scores for these sub-categories and no lie scale.

The Burn Related Supplement (BRS) to the Coopersmith SEI is a 10 item scale with seven items on body image and three items on the social self, which were scored as being "like me" or "unlike me". These questions were developed for the present study and include questions such as "My scars don't really bother me", "I wish I looked like I did before the burn accident", and "Most other people think I'm a good person".

Although these three aspects of adjustment—social integration, emotional adjustment, and self esteem—are defined in terms of separate categories, they are highly integrated aspects of adjustment in that they are all part of the complex interaction between the

individual and society in response to a stigmatizing condition. Individuals who are different tend to see themselves as different and are perceived by others who do not share their condition as different. This can lead to a self-reinforcing system which tends to isolate people who both perceive themselves as different and are perceived as being different.

That victims of severe burns look different is an observable fact. The purpose of the present study is to see whether this particular group of young adults who were burned in childhood perceive themselves as different in terms of their evaluation of their internal self, whether or not they have adjusted emotionally to the change in their body and whether or not they are active participants in society.

HYPOTHESES

Clinical experience suggests that the process of adjustment to the disfigurement and possible disability from a severe burn injury takes place over many years. The adjustment to a burn injury suffered in childhood is obviously a complex process which is dependent on a large number of variables.

In order to place the data on psychosocial adjustment in perspective, a number of variables concerning the patient and the injury were also taken into account. These are: (1) the size of burn, (2) the location of the burn injury, (3) the extent of resulting disfigurement and/or disability, (4) age at the time of the burn, (5) present age, (6) length of time since the burn accident and (7) sex.

It was hypothesized that the severity of the burn injury would be negatively related to a positive adjustment, i.e. that those with the most severe burns would have the poorest adjustment. It was also hypothesized that severe facial disfigurement would tend to be associated with poor adjustment. Severity was measured in terms of four aspects: (1) the percentage of the total body surface burned, (2) the location of the burn on the body, (3) cosmetic impact and (4) functional disability. In the present report, these four aspects of the severity of the injury will be related to adjustment separately. From this analysis, a composite rating of severity will be developed for further analysis.

The developmental period at which a child is burned can be expected to have a significant impact on the child's adjustment. Literature on child development has defined a number of critical developmental period [18, 19, 23]. These are: (1) *Infancy*; when attachment to the mother is seen as central to the development of basic trust; (2) *Early Childhood*, when the child begins to define himself as a separate person with an individual identity; (3) *Middle Childhood*, when the child is concerned mainly with developing a mastery over his or her physical and social environment; and (4) *Adolescence*, when the child begins to develop his or her adult sexual and social identity and begins the separation from the family of procreation in preparation for entry into the adult world.

Adolescence is recognized as an especially critical period in terms of bodily concerns and formation of the individual's self concept and self esteem in relation to body image. For this reason, it was hypothesized that the subject's age at date of burn would be signifi-

Table 2. Characteristics of the population

	Mean	Range
Present age	20.6 yr	17-26 yr
Age at date of burn	7.4 yr	8 months-16 yr
Years since burn	7.8	1.1-23
Percentage total body surface burned	26.9%	2%-85%
No. of admissions	5.9	2-32

cantly related to adjustment, with adolescents having the most difficulty adjusting, and younger children having progressively less difficulty on a continuum from adolescence to infancy.

Present age was also used as a variable, with the hypothesis that the older subjects would tend to have a better adjustment, on the basis of the fact that the younger portion of the sample used in this study was still in late adolescence or early adulthood.

Since the adjustment to a burn injury is assumed to take place over time, it was hypothesized that the subjects who had been burned the longest would tend to have better adjustment. The variable used for this hypothesis was length of time since the burn accident.

It was further hypothesized that females would tend to have a poorer adjustment than males, particularly to facial disfigurement, on the basis of research suggesting that appearance is more highly valued in women than in men [25-30].

In addition to variables relating to the developmental period, a number of other variables can be identified which might influence the child's adjustment to a severe burn injury. These include family stability, pre-burn personality and a history of prior physical and/or behavioral problems in the child. Since data on pre-burn characteristics of the family and personality of the child were not available, however, these variables were not included in the present study.

RESULTS

Characteristics of the population

The present article is a preliminary report, using data from the 89 subjects who have returned their packets to date.

The sample consisted of 48 females and 41 males, with an average age of 20.6 years, and no significant age difference between males and females. Thirty-three percent of these patients were treated for their acute burn at the Shriners Burns Institute (SBI) and 66% received only reconstructive surgery at SBI. All these subjects had a minimum of two reconstructive admissions at SBI, with an average of 5.9 admissions. Table 2 summarizes the data on age, percentage of

Table 3. Distribution of total body surface area burned

TBSA	Number	%
1-14%	34	38%
15-34%	29	33%
35-55%	18	20%
Over 55%	8	9%
Total	89	100%

Table 4. Body parts burned

Body part	Number	%
Face	60	67%
Eyelids	7	8%
Nose	21	24%
Mouth	19	21%
Ears	34	38%
Neck	47	53%
Arms	67	75%
Hands	38	43%
Trunk	63	71%
Breast	33	37%
Genitals	4	4%
Legs	36	40%
Feet	7	8%

body surface burned and the number of reconstructive surgeries.

The distribution of the total body surface area burned is shown in Table 3. The severity of the burn injury is not necessarily related to the percentage of the body which is burned. The depth of the burn, especially where body parts or facial features are lost, as well as the location of the burn injury are important in assessing the severity of the injury. Since an assessment of the proportion of the total body surface area which was a third degree burn was not consistently reported in the medical records for subjects who did not receive their acute care at SBI, this variable was not included in the present study. Severity of the injury was assessed instead by the body parts burned and by the cosmetic impact of the scarring.

In terms of the body parts burned, Table 4 indicates that the most common body parts burned in this population were the face, the trunk and the arms. Table 5 summarizes the cosmetic impact on the various body parts.

Functional disability was found only in the extremities and in the head and neck area. Disabilities in the extremities usually involved lack of digits on the hands or feet, or obvious joint problems. Disabilities in the head and neck area included the inability to turn the head freely and inability to open the mouth wide. Table 6 summarizes the incidence and types of disability found. These percentages do not represent the number of individuals who had some type of disability since several subjects had more than one dis-

Table 5. Cosmetic impact of scars on body areas

Body part	None	Min.	Moderate	Severe
Face	37%	22%	31%	9%
Eyelids	94%	0%	3%	2%
Nose	76%	10%	10%	3%
Mouth	79%	2%	16%	2%
Ears	69%	12%	16%	3%
Neck	51%	16%	26%	5%
Arms	31%	10%	46%	12%
Hands	61%	17%	14%	8%
Trunk	34%	7%	30%	29%
Breast	67%	1%	17%	15%
Genitals	86%	0%	0%	2%
Legs	65%	8%	18%	7%
Feet	97%	1%	0%	2%

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Table 6. Functional disability by body areas

Body part	Number	%
Head and neck	11	12%
Upper extremities	9	10%
Dominant hand	11	12%
Non-dominant hand	11	12%
Lower extremities	7	8%

ability. Interestingly, only 15% of the total subject population mentioned any type of physical disability when asked about physical problems.

Social integration

Demographic characteristics of the study population indicate that the subjects were actively involved in society as indicated by marital status, education and occupation.

Marital status. A total of 41.5% of the males and 31.3% of the females in the subject population were married. As can be seen in Table 7, both males and females in the 18-19 year old group were somewhat more likely to be married than those in the general population; although fewer females in the subject population in the 20-24 year old group were married than was the case in the general population. Although 2.4% of the total were separated, none of the subjects was divorced, which differs from the population at large, especially for younger females and older males.

Of the 36% of the total subject population who had been married, 27% had children. Nineteen percent of these had one child, 5% had two children and 3% had three children. Of the total subject population, 57% said they were or would like to be married in the future and 81% said they would like to have children.

In addition to the subjects who were married, 25% were dating someone steadily, 27% were dating but not steadily, and 12% said they did not date. The average age for beginning to date was 15 years.

In terms of residence, the 36% who were married lived with their spouse and children. An additional 2% lived with someone in a steady relationship. Forty-seven percent lived with their parents and/or other family members. Three subjects (2%) lived with their child or with a roommate, and three subjects lived alone. An additional 4 (4%) did not answer the question.

Education. Seventy percent of the sample had finished high school, 24% were currently in college,

and 6% had finished college. Twenty-six percent had gone to some type of trade school after high school.

Occupation and income. Eighty-nine percent of the subjects had worked, representing a wide range of jobs. Sixty-five percent were currently working and 20% of these were also going to school. A total of 34% were currently in school. The majority of the men in the study population worked in laborer or craftsman occupation. Several of the men owned their own businesses and were doing very well financially. Fifty-nine percent of the women were working, mainly in clerical occupations, and the remaining 23% were in school or were housewives. Only 9 subjects (11%) of the total sample had never worked. Most of the subjects had worked at several jobs, with a mean number of jobs of 2.45. Of these, 94% involved contact with the public. The mean number of jobs involving public contact per subject was 2.13.

Sixty-five percent of the subjects' main source of income was wages and salary. Income ranged from \$0 to \$100,000 with a mean of \$8396; 26% had no income at the time of the study. An additional 2% received welfare payments, 2% received money from relatives and 2% were on Social Security income. One subject's main source of income was from investments, resulting from a lawsuit. Only 2% of the total population had received settlements resulting from litigation over the burn accident.

Since this was a young population where occupational status would be expected to be somewhat fluid and not necessarily related to later occupational status, the subjects were asked about their aspirations in terms of future occupations and education. "Definite" occupational and education aspirations were defined as those where a specific occupation or educational program were mentioned and "hazy" aspiration were those which were stated in non-specific terms, such as "I'd like to get a better job". Forty-six percent of the study population had definite occupational aspirations for the future, 26% had hazy aspirations and 28% had no further occupational aspirations. Most of the latter were planning to stay in their current occupation. Thirty-five percent had definite plans for further education in order to reach their goal, 31% had hazy plans and 34% had no plans for further education. Of those individuals who had definite aspirations, 18% were planning to go into medical careers such as nursing, occupational and physical therapy, including several who wanted to become physicians. An additional 2% were planning to go

Table 7. Marital status compared to the general population

Sex and age	Study population				U.S. census			
	Single	Married	Separated	Divorced	Single	Married	Widowed	Divorced
Male								
18-19	8 80%	2 20%	—	—	94%	5.4%	—	0.2%
20-24	15 57.7%	10 30.5%	1 3.8%	—	65.8%	32.3%	0.1%	1.9%
25-29	—	5 100%	—	—	27.8%	66.3%	0.1%	5.9%
Total	56.1%	41.5%	2.4%	—				
Female								
18-19	12 70.6%	5 29.4%	—	—	81.3%	18.1%	—	6.6%
20-24	13 59.1%	8 36.4%	1 4.5%	—	47.6%	48.5%	0.2%	0.6%
25-29	1 33.3%	2 66.7%	—	—	18.0%	73.3%	0.6%	3.6%
Total	66.7%	31.3%	2.1%	—				

into other "helping professions" such as clinical psychology and social work and counseling. Most of the subjects who indicated that they wanted to go into the helping professions mentioned that the main motivating factor in this choice was wanting to help people after their experience of being burned and their experience with medical and other personnel throughout their treatment.

Social involvement. In terms of social involvement in community and leisure time activities the study population did not appear to differ from the general population. Ninety-four percent of the subjects were involved in activities with family and friends and only five (6%) said that they spent most of their spare time in solitary pursuits. Most of these subjects were working and/or going to school and only two seemed to be socially isolated in general.

In summary, it appears that the study population is not substantially different from what would be expected from the general population of this age range. In general, they are active participants in numerous social networks, including the family, friendship networks, various types of institutional networks relating to occupation and education, and to the general public. They are not isolated individuals, except in a very few cases, and it is unknown whether or not the 2% of the study population who appeared to be socially isolated differs from the population at large.

Emotional adjustment

The assessment of emotional adjustment in the present report focuses on the subjects' answers to a number of open-ended questions relating to their experiences since the burn accident and how they reacted and coped with them. The answers to these questions focused on adjustment to scarring and to "being different", both from the point of view of the individual's perception of self and from the point of view of their perception of society's reaction to them. The answers to the question "What was the hardest thing for you to adjust to about being burned?" focused on this issue.

The answers were recognized as having two dimensions. The first was concern over disfigurement versus disability and the second referred to their concern over the reactions of others to them versus an internal self-concern.

In terms of the disfigurement versus disability dimension, 85% said that adjusting to their scars was the hardest while only 15% mentioned physical problems. Twenty-seven percent of those who were concerned about disfigurement mentioned the location of their scars. The most common areas mentioned were the face, the back, and the legs. The back and legs were mentioned by women who said that they did not wear halter tops or shorts because of their scars.

Physical problems included lack of hand dexterity, chronic open wounds on the feet, and balance. In addition to these, hot and cold weather were cited as problems two young men faced in their employment; hot weather because of the lack of sweat glands in grafted skin, which increases the risk for heat exhaustion, and cold weather because of compromised circulation in areas which were deeply burned. Three subjects also mentioned that they had not been able to participate in sports after they were first burned.

In terms of the external/internal dimension, 64% indicated that they had experienced problems regarding their relationships with other people. The most commonly mentioned problem was "people's reactions" in general, including staring, questions and avoidance behavior. Although 43% of these mentioned the general public as opposed to people that the subjects knew, 57% referred to people in general, implying not only strangers but also people that they knew. The next most common category of concern was acceptance by peers. Twenty-nine percent of those who talked about this dimension discussed problems with peers when they returned to school. Here staring, questions, and avoidance behavior were also the biggest problems. An additional 14% specifically mentioned problems in dating and intimate relationships. Seven percent cited problems within the family, mainly with siblings, as being the most difficult.

Of the 35% of the subjects who mentioned internal concerns, the most common theme was concern with "being different". Although this theme is obviously closely related to concern with disfigurement and acceptance by society, these answers differed in quality from the concerns with scarring in that they specifically dealt with respondents' problem in coping with the fact that they were different, rather than with the external fact that they had scars on their body or their concern with other people's reactions. An additional 32% of the subjects who mentioned internal concerns specifically discussed problems of self-acceptance. Four subjects also mentioned difficulty in controlling their anger about their situation.

To summarize the answers to this question, most of the subjects had experienced difficulty in coping with the fact that they were visibly different from the general population because of their scars. They recognized that people reacted to them differently and they were worried about whether or not they would be accepted by other people. As was expected, acceptance by peers in general and by members of the opposite sex in particular were very important. Concern with acceptance by the family did not appear to be as important, probably because the family was recognized as their main source of support. In addition to concerns about acceptance by society, these subjects were also concerned about self-acceptance, probably recognizing that self-acceptance was an important step in gaining acceptance from others.

The answers to the open-ended questions, in fact, made it very clear that adjustment to a severe burn was a process which took place over time. Two of the most revealing questions asked whether people treated them differently after they were first burned and whether people treated them differently now. These questions also asked the subjects how they reacted if they were treated differently and how they felt about it. Substantial differences were found when the two questions were compared.

The subjects stated that they were treated differently after they were first burned, by family, peers, teachers, and strangers. Since some of the subjects were very young when they were burned and do not remember how it was when they first went home from the hospital, they were asked if they remember being treated differently and how old they were at the time. The answers to this question were grouped with the

Table 8. Perceived differences in social reactions after burn injury*

	Pitied		Overprotected (spoiled)		Avoided ignored		Teased		Curious		Supported		Other		Total	
Parents	1	5%	13	61%	—	—	1	5%	—	—	6	29%	—	—	21	19%
Sibs	3	30%	2	20%	—	—	4	40%	—	—	—	—	1	10%	10	9%
Peers	2	4%	3	7%	13	30%	23	52%	1	2%	2	5%	—	—	44	40%
Teachers	2	25%	3	38%	1	12%	—	—	—	—	2	25%	—	—	8	7%
Strangers	2	14%	—	—	1	7%	—	—	11	79%	—	—	—	—	14	13%
Everyone	2	18%	4	37%	1	9%	—	—	3	27%	—	—	1	9%	11	10%
Other	—	—	1	50%	—	—	—	—	—	—	—	—	1	50%	2	2%
Total	12	10%	26	24%	16	15%	28	26%	15	14%	10	9%	3	2%	110	100%

* Since several of the subjects mentioned more than one type of difference, the total is more than the number of subjects.

answers to the question "Were you treated differently after you were first burned?" of the 86% of the subjects who answered this question, 97% said that people did treat them differently after they were burned. Table 8 summarizes the people whom the subjects said treated them differently and how they treated them.

As can be seen from Table 8, peers were perceived to be the most common persons (40%) who treated the burn victims differently after the accident. The most common ways for peers to react was to either ignore or avoid the burn victim or to tease him/her. Several of the subjects, mostly males, mentioned getting in fights with peers over the name calling and teasing. The next most common category perceived as acting differently were parents (19%). Of these, 61% were perceived as overprotecting the subjects and "spoiling" them. Twenty-nine percent of the subjects who mentioned parents said they were an important source of support, even though there was a separate question asking who had supported them. A few of the subjects (9%) also mentioned that their siblings treated them differently, five of these by pitying and overprotecting them. An additional four subjects said that their siblings teased them and fought with them after the burn injury.

Teachers were also perceived by the subjects as treating them differently (7%), usually by overprotecting and giving them special privileges or by pitying them, although two subjects also recognized them as an important source of support.

Thirteen percent of the subjects said that strangers treated them differently, most of these (79%) by staring at them and asking them questions. Ten percent of the subjects were non-specific and said that "everyone" treated them differently, with the types of treatment being fairly well distributed among the categories.

There was a significant difference in the answers to the question "Do you feel as if people treat you differently now?" Fifty-two percent of the people who answered this question said that people treated them differently, in contrast to the 95% who said that people treated them differently when they were first burned. Of these, 90% reported that strangers were the only ones who still treated them differently. Most said that their friends and workmates treated them as equals. Many of them stated that their friends would

forget they were burned until reminded. Only two out of the total felt that people in general still treated them differently.

When asked what time had been particularly difficult for them, most said that returning to school or starting school was the most difficult (32%). Twenty-seven percent said that their early teenage years were the most difficult because of their problems and/or worries about relating to the opposite sex in dating and intimate relationships. An additional 9% said that their initial return to society in general after being released from the hospital was the most difficult, and 9% mentioned other unrelated times, such as going back and forth to the hospital, an experience during acute hospitalization, or guilt about the accident through childhood. Only five subjects said their most difficult time was "now", or mentioned a traumatic event in the recent past as their most difficult time. Three subjects mentioned times which were unrelated to the burn injury.

When asked if there was anyone who especially helped them through their experience of coping with being burned, 77% identified someone who had helped them. The answers to these questions are summarized in Table 9. As can be seen in Table 9, the family was seen as the most important source of support (42%). Within the family the mother was mentioned most often (47%). "Parents" collectively were cited 21% of the time and "the family" 11% of the time. The father was specifically mentioned 11% of the time and a sibling 10% of the time. Outside the family, a friend of the same sex was mentioned as being an important source of emotional support, as well as a boyfriend or girlfriend or spouse.

Whether someone inside and/or outside the family was cited, the 77% of the subjects who felt that someone else had helped them said that they had been helped in the following ways: the people they cited told them that (1) they cared about them whether they had scars or not, (2) that what was important about a person was what was on the inside, and (3) that they were capable of doing anything they set out to do.

Twenty-two percent of the subjects said either that no one had helped them or that they had helped themselves, and two subjects did not answer the question. Several subjects stated specifically that their parents had overprotected or "spoiled" them and that

Table 9. Persons perceived as having helped in adjustment process

	Number	%
Family	44	42%
Best friend	15	14%
Spouse/boyfriend/girlfriend	7	7%
God	6	5%
SBI staff	9	8%
Myself	4	4%
No one	16	15%
Other	3	2%
No answer	2	2%
	106*	100%

* Some subjects mentioned more than one person as a source of support.

this had not done them any good; they felt instead that this had been another hurdle for them to overcome.

Most of the subjects who mentioned the Shriners Burns Institute said that it was only when they came to the hospital and saw other burned children that they realized that they were not as badly burned as they could have been. Several mentioned specific members of the staff, nurses, occupational and physical therapists, and the staff psychologist, who encouraged them and told them not to feel sorry for themselves.

Throughout the answers to the narrative questions, it was evident that most of the subjects had come to terms with their injuries and the resulting disfigurement and/or disability. When asked what advice they would give to someone else who had been burned, they listed a number of interrelated concepts which made it clear that most of them had made a positive emotional adjustment, assuming that they took their own advice. The answers are summarized in Table 10.

As can be seen in Table 10, only six subjects (7%) did not know what kind of advice to give to someone else who had been burned. Of the 84 subjects who answered this question, 94% had advice which was obviously learned from their own experiences. The following quote from one of the subjects is an example of the type of advice that most subjects gave.

My advice would be first of all not feeling sorry for yourself. I would tell them to be thankful for what they have, to get out and make their own way. Face the world and try to do what you want to. Don't use your scars for an excuse for your failures. Try to be understanding of people who are embarrassed of your scars. Don't let people feel sorry for you and make it easy for you. Above all, don't let your burn scars scar your personality.

Most of the subjects (70%) said that they had thought about the meaning of the burn accident in their lives. Eight percent said they had not thought about it and 22% did not answer the question, which asked "When something bad happens, like being burned, most people do a lot of thinking about why it happened to them. Have you thought about why it happened to you? If yes, how do you explain it?"

Of those who said they had thought about it, 43% had an explanation that related to the supernatural. Many said that it was part of God's plan, and several

mentioned Fate or Karma. Eight subjects related that they had felt the accident was punishment from God when they were first burned, but that they no longer felt this way. Some of these subjects explained it now as part of a Divine plan in a more positive way and some said they now believed that it was just an accident. Sixteen percent of the total who said they had thought about an explanation for the injury felt that it was merely an accident. Another 16% said that the accident was their fault, e.g. by playing with matches or holding their nightgown over the heater, and that the burn injury was the consequence of their carelessness. Twenty-five percent of the subjects who said they had thought about it had no explanation. Twenty subjects did not answer this question, which is a relatively high non-response rate, indicating that some of the subjects probably still felt uncomfortable about this aspect of their adjustment.

Summary

To summarize, the data on emotional adjustment indicates that the adjustment to a severe burn injury is a complex process which takes place over time. The process of internal acceptance of the external changes in the body produced by scarring and disability is central to this process. Other people can help the burn victim by letting him/her know they care and by their encouragement to live a normal life. The family is central in this type of support, but peer support is also very important. It appears, however, that the main process of acceptance comes from inside the individual. A recurring theme in many of the subject's answers to a number of the narrative questions was "When you accept yourself, others will accept you". It also appears that putting the injury in perspective in terms of the burn victim's world view is important, i.e. how they answer the question of "Why me?" When the burn victims are able to accept themselves for what they are after the injury, and when they can put it in perspective in their lives, they appear to have made a positive adjustment to their situation.

Self esteem

Self esteem is clearly very closely related to the adjustment process discussed above, since it refers to the changes which take place within the internal conception of the self. The Coopersmith Self Esteem Inventory for adults, which was used to assess this aspect of adjustment has a mean score of 76.1, with a standard deviation of 11.1. The mean score on the Coopersmith Self Esteem Inventory (SEI) for the subject population was 69.5, which is within one standard deviation of the normative score.

The scores for the Burn Related Supplement (BRS) were distributed on a continuum from 1 to 10 with a mean of 6.2. In terms of body image, 68% said their scars did not really bother them. At the same time, 67% said they wished they looked like they did before the burn injury, 47% said they wished they could change their body, and 53% said they were more comfortable if their scars are covered. Fifty-eight percent, however, said that they liked their looks and 88% answered yes to the statement "I am a beautiful person on the inside".

The questions relating to the social self indicated the subjects had a generally positive outlook. Ninety-

Table 10. Advice to other burn victims

	Number	%
Accept condition/be thankful to be alive	27	30%
Excel/never give up	25	28%
True beauty is on the inside/accept yourself and others will accept you	22	24%
Rely on self/don't let others bother you/be proud	18	20%
Don't isolate self/open self up to people	16	18%
Recognize your emotions and cope with them	3	3%
Stay close to family	3	3%
Don't know	6	6%
Didn't answer	5	6%

* These figures represent the percent of subjects who mentioned each dimension in their answer, and therefore add up to more than 100%.

two percent answered yes to the question "Most people think that I am a good person". Seventy-five percent said that it did not bother them if people asked them questions about their scars, and 58% said that most people do not notice their scars.

Relationships

In this preliminary study, self-esteem on both the Coopersmith SEI and the BRS were used as a gross measure of adjustment which was easily quantifiable and represented a sufficient range for comparison. These scores were analyzed in relation to sex, extent of burn (total body surface area burned), cosmetic impact on body parts burned, age at date of burn and length of time since burn.

Although the mean score for females on the Coopersmith SEI was 67 as opposed to 72 for the males, this difference was not statistically significant, nor was the difference in the means for the males and females on the BRS, as can be seen in Table 11.

Five females and eight males did not fill out the Coopersmith SEI and eight females and 12 males did not complete the BRS. The significance of this lack of data is unknown at present, but could reflect a reluctance to deal with this type of information and will be further investigate in relation to other data.

In terms of the extent and severity of the burn injury, total body surface burned was not significantly related to self esteem on either the Coopersmith SEI or the BRS, and can be seen in Table 12.

When cosmetic impact on the various body parts burned was compared to self esteem, no significant relationship was found, on either the Coopersmith SEI or the BRS for any of the body parts. Table 13 shows self esteem in relation to those with and without facial burns.

Since severe cosmetic impact to the face was hypothesized as being related to poor adjustment, subjects with severe facial burns were compared to non-facial burns in terms of self esteem. Again, no significant relationship was found. An in-depth analysis of the eight subjects who had severe facial burns was undertaken in order to see if other factors could explain the lack of relationship. All of these subjects had received deep burns to the face requiring resurfacing of the face with skin grafts after the initial grafting, as well as reconstruction of facial features, such as eyelids, noses, lips and ears. Six of these subjects were female and two were male. They ranged in age from 19 to 24, with a mean age of 20.4. The total body surface area burned ranged from 23 to 49%, with a mean of 34.5%. All the subjects had finished high school and two were in college. All the subjects had worked, with most of these jobs involving contact with the public. One of the older subjects was married, and all but one said they had dated. A subjective evaluation of their emotional adjustment based on their answers to the open-ended questions indicated that five of the subjects had average adjustment, two had good adjustment and only one had poor adjustment.

Present age was the only variable which was signifi-

Table 11. Comparison of male and female self esteem scores

		Number of cases	Mean SE score	SD dev	SD error	2-tail Prob.	T value	Significance
CSEI*	Male	33	18.00	6.04	1.05	0.36	-0.90	NS
	Female	43	16.76	5.76	0.87			
BRS†	Male	29	6.34	2.80	0.51	0.55	-0.60	NS
	Female	41	5.97	2.35	0.36			

* CSEI = Coopersmith Self Esteem Inventory. The scores must be multiplied by 4 to be comparable to the scoring used by the inventory.

† BRS = Burn Related Supplement.

Table 12. Comparison of total body surface area burned and self-esteem

	χ^2	Significance	R^2	Significance
CSEI	5.557	0.69 NS	0.00	0.41 NS
BRS	6.204	0.62 NS	0.00	0.48 NS

Table 13. Comparison of face/no face burns and self esteem scores

		No. of cases	Mean SE score	SD	SD error	2-Tail Prob.	T value	Significance
CSEI	Face	15	15.80	4.61	1.19	0.24	-1.31	NS
	No face	61	17.67	6.12	0.78			
BRS	Face	14	5.42	2.50	0.66	1.00	-1.16	NS
	No face	56	6.30	2.53	0.33			

Table 14. Present age and self esteem scores

	Age	Mean SE score	SD	Mean square Between groups	Mean square Within groups	Significance	R ²	Significance
CSEI	16-18	14.35	5.24					
	19-21	18.86	4.50	116.17	28.55	0.02	0.03	0.04
	22+	18.03	6.17					
BRS	16-18	5.11	2.39					
	19-21	6.50	2.20	11.53	6.28	0.16	0.01	0.12
	22+	6.40	2.87			NS		

cantly related to self-esteem, with younger subjects tending to have lower self-esteem on the Coopersmith SEI, as can be seen in Table 14. No significant difference was found, however, in the BRS. Since there are no norms on the Coopersmith SEI for different ages of adulthood, it is not known whether differences in the direction obtained are representative of younger adults in general. The fact that no differences were found when the means were compared on the BRS makes this finding difficult to interpret.

Age at date of burn was found not to be significantly related to self esteem, although there was a tendency for subjects burned at a lower age to have lower self esteem, as can be seen in Table 15. A comparison of the groups who were in the lower age groups in terms of present age and age at date of burn was made in order to see if these were the same subjects. This analysis yielded negative results, indicating that the younger subjects in the population were not those who were burned at a young age.

When self esteem was analyzed in terms of time since the burn injury, no statistically significance difference was found, as is shown in Table 16.

Summary

The analysis of self-esteem in relation to the physical variables indicates that none of the relationships appears to be important in influencing this measure of adjustment. The extent and severity of the burn, as well as age at the time of the burn injury and time since the burn injury, did not help to predict self-esteem, either for the Coopersmith SEI or the Burn Related Supplement. Only present age was significantly related to self esteem, and this relationship is questionable.

CONCLUSIONS

Conclusions from the present study indicate that the extent and severity of the burn as well as the age

Table 15. Comparison of age at date of burn and self esteem scores

	Age	Mean SE score	SD	Mean square Between groups	Mean square Within groups	Significance	R ²	Significance
CSEI	0-5	15.96	5.56					
	6-10	18.25	6.01	52.95	30.31	0.18	0.03	0.07
	11-16	18.65	5.10			NS		NS
BRS	0-5	5.84	2.70					
	6-10	6.07	2.51	5.96	0.37	0.81	0.00	0.29
	11-16	6.61	2.37					

Table 16. Comparison of time since burn injury and self-esteem

	χ^2	Significance	R ²	Significance
CSEI	4.185	0.38 NS	0.00	0.43 NS
BRS	1.315	0.85 NS	0.01	0.13 NS

at the time of the burn and the elapsed time since the burn do not help us to predict adjustment as measured by self-esteem. These conclusions were unexpected by the investigator and need some interpretation. They either mean that this measure of adjustment is not adequate or that there are other factors which are more important in determining adjustment.

Although the two instruments used to measure self-esteem are a shorthand way of assessing adjustment, there is no reason to suppose that the use of the Coopersmith Self Esteem Inventory on the study population is not valid. Since the results are corroborated by the Burn Related Supplement, there is added evidence that the assessment used is reliable.

Although comprehensive analysis of the relationship of the subjects' individual self esteem scores and other measures of adjustment such as extent of social integration and the quality of emotional adjustment have not been made as yet, it does not appear that the general results obtained on each of these aspects of adjustment are incompatible. Most subjects are active participants in society as evidenced by their involvement in numerous social networks relative to the family, education, occupation and community and leisure time activities.

Although there was considerably more variation in the subjects' emotional adjustment as measured by their response to the narrative questions, most subjects also showed that they had a positive emotional adjustment to their burn injury. They chronicled many difficulties along the way, however, indicating that the emotional adjustment to this type of injury is a complex process which involves both an internal acceptance and an external participation in society. It takes time and it requires both internal strength and external support of people who care. In fact, social and emotional support from family and friends and other people who are significant to the burn victim—such as teachers, coaches and hospital personnel—may be more important variables than the physical variables used in this study in predicting adjustment outcome. The other variable of "internal strength" and "coping ability" is much more difficult to measure, but may be the most significant of all. The general conclusion to the present study is that childhood burn victims can and do make a positive psychosocial adjustment to this devastating injury.

Future research stemming from this project leads in a number of different directions. First, the present study will be completed in terms of gathering data on the remaining 20 subjects who have agreed to participate, and in terms of a more comprehensive computerized analysis of the relationships of social integration, emotional adjustment and self esteem for each of the subjects.

Secondly, a control group of unburned young adults will be studied in order to compare the present study population with a similar population of unburned subjects in terms of social integration and self esteem.

Thirdly, a more comprehensive study of cosmetic impact on society at large is contemplated in order to measure this aspect of the system.

Fourthly, prospective research is currently underway by the investigator and her colleagues which in-

cludes comprehensive background data on the child and his/her family before the accident and will compare adjustment outcome up to three years after the burn accident. Social support and an assessment of the child's pre-burn adjustment are considered to be central to this research.

Hopefully, this research, as well as research being undertaken with other populations of burn victims and victims of other traumatic or congenital disfiguring and disabling conditions, will lead to an understanding of the dynamics of stigmatized people and their relationships to the society and culture in which they live.

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FAMILISM AND HOSPITAL ADMISSION IN RURAL NIGERIA—A CASE STUDY

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Abstract—Traditionally in Nigeria, especially in the rural areas, familism (the subordination of individual goals and decisions to those of the family) has always played a very important role if not a dominant role in the day-to-day decisions that people make about present and future plans. In the light of social changes which are said to have affected the institution of the family all over the world, this study was undertaken to see if changes have occurred in rural families in Nigeria. Specifically, the study examined (a) the extent to which people depended on the family decision for hospitalization; (b) whether family consent was required in all cases before the sick was hospitalized, and (c) the extent to which this practice was approved by the people. In all these dimensions of the investigation, there was consistent evidence of family dominance with regard to the hospitalization of the sick member of the family. In other words, among rural people in the study area, a decision as to whether a sick person should be hospitalized or not was not yet the exclusive responsibility of an individual but that of the family. It is thus suggested that in dealing with rural people in this area, whether in a matter of health or in other planned programmes of change, individuals alone should not form the focus of expert-client relation as a decision unilaterally taken by an individual may be overturned by the family.

Traditionally in Nigeria, especially in the rural areas, familism has always played a very important if not a dominant role in the day-to-day decisions that people make about present and future plans. Familism is defined here as the subordination of individual goals and decisions to those of the family.

In most developed societies the trend is for individualism to replace familism, but in Nigeria as in most other developing countries, the rural family is not only familistic but may also be patriarchal in nature. Customarily, in Nigeria, the extended family has always comprehended individuals within it, supported and sanctioned them. Individuals are not quite free to develop their unique capacities and powers. The family always exacts certain disciplines and obligations such as the choice of marriage partners to best serve the harmony and propriety of extended family life and tradition.

The influence of the family on individuals within it is not limited to matters pertaining to the choice of spouse. Frequently the decision as to whether and when a divorce may be necessary comes under family jurisdiction. And, more importantly, individuals may not be allowed to make a unilateral decision on delicate emotional matters such as the use of birth control devices and the voluntary limitation of family size. A unilateral decision on such matters often has far reaching implications for the family as a whole.

Unlike the practice in Western countries, among most rural Nigerians the decision whether or not a sick person should be hospitalized has never been totally an individual decision but is one taken by the family. In the United States for example, the physician's recommendation that an appendix be removed probably will involve consultation with the patient's spouse, but it is not an occasion for a family meeting [1].

Public health personnel working in international programmes in developing countries report that even in small families a patient often is not free to make

decisions that are taken for granted in Western countries [2]. Bailey points out how, among the Navaho, the decision to enter hospital is reached only after a family conference: a woman and her husband alone are not free to exercise their discretion in this regard [3]. Margaret Clark found the same situation in the Spanish-speaking Mexican enclave of Sal Si Pudes in San José, California: hospitalization is a grave and serious step, a familial rather than individual problem [4].

Kim has pointed out a similar situation in Korea. "If, for example, a young wife is found to have tuberculosis requiring hospitalization, the physician must first explain the problem to her parents-in-law who occupy the position of authority in the family; her husband does not have the right to make a decision. Or, if a mother finds her child has malaria, she must first ask her parents-in-law's permission to take the child to a modern health centre. If they say no, she is reduced to patronizing a herb doctor". [5] Marriott describes an identical example in the Indian village in which he worked. "The father's brother of a Brahman girl ill with malaria begged the doctor for quinine, and enough was supplied for a full course of treatment. Three days later he discovered that none of it had been used. An old widowed aunt who ruled the women of that family had voiced objections, and the whole matter of western treatment was dropped" [6].

Obviously, the conservative pull of such traditional authority often have sad consequences for the sick or injured individuals in rural Nigeria and elsewhere where familism is cherished. Although there is an absence of definitive statistics, there is no doubt that many deaths and infirmities among rural people could be attributed to traditional familial authority. Also, although most rural Nigerians depend on family decision for almost everything, even in private matters, no study has been done, at least in the Cross River State, to ascertain this phenomenon. Many books have been written and mentions made of

changes in both family structure and form. Frequently such changes have been attributed to growing industrialization and urbanization. In the light of these reported changes our aim in this exploratory study was:

(1) to ascertain the extent to which rural people in the Cross River State of Nigeria still depend on family decision for hospitalization;

(2) to ascertain whether in all cases of hospitalization the family's consent must be obtained before the sick person is hospitalized; and

(3) to determine the extent to which people approved of this practice.

METHODOLOGY

The data for this study are only part of the general survey on health and medical practices in the area. The study area was made up of five rural villages in Uyo Division of the Cross River State. None of the five villages was less than 40 kilometers (25 miles) from Uyo, the nearest urban center. There was no hospital in any of the five villages, but two of them had a maternity and a health centre respectively. Most of the inhabitants of the study area were subsistence farmers.

The sample consisted of 450 male heads of household or families in the five villages. Ninety male heads of household, randomly selected, were interviewed in each of the five villages. However, in every village only those families which have in the past hospitalized either wife, children, brothers, sisters or other relations were interviewed. Interviewing only those families which have actually in the past hospitalized patients rather than those who have not was considered the best way of ascertaining the extent to which the people depended on family decision for hospitalization of patients. In future, however, this study could be broadened to include families which

have never hospitalized family members. The decision to interview the male heads of household only was based on the fact that traditionally in Nigeria, even in urban areas, we have male dominated families in almost all matters affecting the family. The data were collected in September 1978 through interview schedules administered on the selected family heads by trained interviewers.

FINDINGS

Family composition

Although the extended family is the dominant type of family system in Nigeria, it was considered necessary to ascertain if all the families in our sample were of this type. We considered a family nuclear if it was made up of a man and wife or wives and their offspring. And we designated a family extended if it included near and distant relatives besides the nuclear family group. On the basis of this classification, the 450 families were distributed as follows:

341 (76%) of them were extended families, while only 109 (24%) were nuclear. As would be expected, there were more individual family members in the extended families than in the nuclear families. The average family size in the nuclear family was 6.5 while that of the extended family was 11.0 people. Table 1 shows this distribution.

Age composition of family members

Table 2 shows the age distribution of individuals in both nuclear and extended family households. The data show that there is a relatively higher proportion of persons in the 0-19 and 40 and above age groups than in 20-39 age group in the sample in both nuclear and extended family. This reflects high fertility in the rural population and the high level of migration of the able-bodied with the numerous younger and the elders left behind.

Table 1. Average number of individuals in the households by family type

Family type	No. of households	No. of individuals	Average no. of individuals per family
Nuclear	109	709	6.5
Extended	341	3751	11.0
Total	450	4,460	9.9

Table 2. Age distribution of individuals by family type

Age distribution	Family type			
	Nuclear		Extended	
	No.	%	No.	%
0-9	209	29.5	1084	28.9
10-19	187	26.4	934	24.9
20-29	106	14.9	513	13.7
30-39	93	13.1	476	12.7
40 and above	114	16.1	744	19.8
Total	709	100.0	3751	100.0

Table 3. Age distribution of the patients by family type

Age distribution	Family type			
	Nuclear		Extended	
	No.	%	No.	%
0-9	115	30.2	1156	30.8
10-19	109	28.6	1050	28.0
20-29	50	13.1	487	13.0
30-39	42	11.0	419	11.2
40 and above	65	17.1	639	17.0
Total	381	100.0	3751	100.0

Patients' age

Altogether 3270 people were said to have been hospitalized among the 450 families. A breakdown of this figure shows that of the 709 people in the nuclear families, 381 (53.7%) of them were hospitalized and of the 3751 persons making up the extended families 2889 (77.0%) of them were hospitalized. The age distribution of those hospitalized are shown in Table 3. This shows that regardless of family type, there is a relatively higher proportion of patients in the 0-19 and 40 and above age groups than in the 20-39 age group in the sample. The fact that there are no significant percentage differences between nuclear and extended family in the ages of those hospitalized in all the age groups tends to suggest that perhaps an environment (in this study, the rural area) where people live may be a more important health factor than whether they belong to a nuclear or extended family. This inference, however, calls for further investigation.

To find out the extent to which respondents depended on their family's decision for the hospitalization of the sick, family heads were asked "When someone is sick and requires hospitalization, who decides if the person should be hospitalized or not—the family or an individual?" Of the 450 heads of household or family interviewed, 378 (84.0%) of them asserted that it was a family decision, while only 72 (16.0%) of them said that it was an individual decision. For practical reasons we did not test the effect of family type on the decision concerning the hospitalization of individual family members. Firstly, as has been reported earlier, the proportion of the nuclear family was very low, only 16% compared to 84% of the extended family. Secondly, and perhaps more importantly, in Nigeria belonging to a nuclear family does not usually absolve an individual of his subordination to the overall family decision even on matters affecting such an individual. In short, in this culture no one is really an individual. Even when one lives in a nuclear family household one still belongs to a network of extended family system outside one's nuclear family. At best, belonging to a nuclear family household only makes family decision-making about an individual less complicated. Our second objective was to find if family consent was necessary in all cases before the sick was admitted to hospital; after his admission; or after his discharge. The main purpose of this question was to see if the responses given would support our earlier finding. Specifically, if a substantial number of the respondents said family consent was necessary before admission, the domin-

ance of the family on this issue would be confirmed. Table 4 which follows shows a distribution of response to this question. The data show that slightly less than two-thirds of the respondents said that family consent or approval was necessary or was obtained before a sick person was admitted in the hospital, while a little over one-third of them said that they obtained family consent either after the sick person has actually been admitted or has been discharged from the hospital. The fact that up to 170 (38.0%) of the 450 respondents admitted that family consent was not necessary before the admission of the sick in the hospital may not in reality represent the people's disregard for the authority of the family. Rather, failure to seek the family consent before hospitalization of a sick person as exhibited by 38% of our respondents, may be due to several reasons. Some families may wish to avoid publicity of an individual's sickness or they may suspect a family member or members as being responsible for an individual's illness. Thus they may conceal the hospitalization of the individual to avoid his health being worsened by the suspected wicked family member or members.

In order to find out the respondents' attitudes towards the future of familism, they were asked to express their opinion as to whether they thought the practice should continue; should not continue; or whether they were undecided about the issue. Table 5 presents a distribution of response to this question.

As can be seen, the trend reported earlier is almost repeated. Of the 450 respondents 274 (61.0%) of them approved the continuation of this practice; 125 (28.0%) disapproved of it, while only 51 (11.0%) of them remained undecided over the issue. Here again the 61% of the respondents, constituting those family heads wishing the continuation of the practice, offers a clear indication of the domination of family authority over individuals. However, the 39% of both those disapproving the practice and of those remaining

Table 4. Family consent and hospitalization of a sick person

When family consent is necessary	Number	%
Before administration	280	62.2
After administration	105	23.3
When discharged	65	14.5
Total	450	100.0

Table 5. Do you think this practice should continue?

Responses	Number	%
Should continue	274	60.8
Should not continue	125	27.9
Don't know	51	11.3
Total	450	100.0

undecided may be an indication that the family is gradually losing its traditional influence.

Although up to 61% of the respondents appear to prefer the continuation of family dominance over the individual, Table 5 does not show whether such attitude varies with independent variables such as age, occupation or level of education. To examine this, independent variables of level of education and age of the family heads were correlated with the attitudes of the respondents towards the continuation of family dominance. These two variables were selected because they are two of the few variables frequently used in measuring change. It would therefore not be surprising that level of education and age of the family heads interviewed could determine whether or not they preferred familism to individualism. It was expected that respondents with higher education will be less inclined to favour the continuation of familism than respondents with lower level of education. By the same token, it is expected that more younger family heads will tend to disfavour familism than older ones. Tables 6 and 7 show the associations of the attitudes of family heads towards the continuation of family dominance with levels of education and age of the respondents. Table 6 shows that there is a positive relationship between educational level of respondents and their attitudes towards the continuation of family dominance. The more educated the respondents the less the tendency to approve a continuation of family dominance. Conversely, the less the educational level

the more the tendency to favour a continuation of family dominance.

With regard to the age of the family heads in our sample, it must be said that unlike those of the patients and individual family members presented in Tables 2 and 3, the lowest age of a family head was 20 while the highest was 75. However, for ease of analysis the ages of all family heads were placed into the four categories shown in Table 7.

As in the case of educational level, Table 7 shows a positive correlation of age with the attitudes of our respondents towards the continuation of family dominance. In other words, family heads aged 46 years and above are more favourable to the continuation of family dominance than those aged 45 and below. Conversely, people aged 45 and below are more likely to disfavour the continuation of family dominance than those aged 46 and above.

Implications of the findings

The practical implications of the findings reported in this study are apparent. Technical aid experts working in rural Nigeria in any field in urging specific courses of action which to westerners appear to involve only the individual must, in fact, find ways to communicate with and gain the support of the individual and groups in whom authority is vested. Marriott points out how lines of power within families affect utilization of medical treatment in an Indian village:

Whatever the treatment may be that is suggested by a specialist, it will be mediated and enforced, or perhaps modified or rejected according to who is most influential in that particular family. The exploratory clinic in Kishan Garshi encountered this thoroughly "sold" to some members of a family but were later rejected by others who had controlling voices in the family. Since families in the villages of northern India frequently lack lines of authority that are obvious to non-members, and since the social worlds of men and women are sharply divided, authoritative com-

Table 6. Relationship between educational level of family heads and attitudes towards continuation of family dominance

Attitudes towards continuation of family dominance	No. of formal education		Primary school education		Sec. school education		Post Sec. school education		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Should continue	100	83.4	81	72.9	56	52.3	37	33.0	274	60.9
Should not continue	15	12.5	21	19.0	35	32.8	54	48.2	125	27.8
Don't know	5	4.1	9	8.1	16	14.9	21	18.8	51	11.3
Total	120	100.0	111	100.0	107	100.0	112	100.0	450	100.0

Table 7. Relationship between age of family heads and attitudes towards continuation of family dominance

Attitudes towards continuation of family dominance	Age of family heads									
	20-35		36-45		46-55		Over 55		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Should continue	34	34.4	51	49.1	86	71.0	103	81.8	274	60.9
Should not continue	47	47.5	39	37.5	24	20.0	15	11.9	125	27.8
Don't know	18	18.1	14	13.4	11	9.0	8	6.3	51	11.3
Total	99	100.0	104	100.0	121	100.0	126	100.0	450	100.0

munication by the medical specialist must aim to include all important family members of both sexes, if it is to be effective.

The subordination of individual decisions and plans to those of the family should not be considered irrational. It is logical and obvious. Margaret Clark has made clear the conditions which underlie the patterns and reasons for group decisions in cases dealing with medical treatment. She points out that in illness as well as in other aspects of life, people are members of a group of relatives, to whom they are responsible for their behaviour and on whom they are dependent for support and social sanction. "Medical care involves expenditure of time and energy by the patient's relatives and friends. Money for doctors and medicines comes from the common family purse; many of a sick person's duties are performed during the period of illness by other members of his social group". Illness obviously is more than a biological disorder; it is a potential social and economic crisis for an entire group of people. Under such circumstances it is not surprising that an individual cannot even decide unilaterally that he is ill. Symptoms must be presented to the group, described and observed, and consensus reached. In other words, an individual is not socially defined as a sick person until his claim is validated by his associates. Only when his relatives and friends accept his condition as an illness can he obtain exemption from the performance of the normal daily tasks. Since illness directly affects an entire group, it is only logical that the group should be expected to participate in the decision that must be made [8].

CONCLUSION

Most observers have agreed that the extended family in Africa as a social institution is so strong that it is difficult to say whether significant changes will occur in the immediate future. At the same time these people have conceded that changes are taking place even though such changes may be negligible. Lloyd, for instance, has stated that it is difficult to assess the type of family structure that West Africa needs at the present time [9]. Nevertheless, he has acknowledged some changes by saying that:

Yet, even if we cannot always evaluate the effect of changes in family structure, we cannot ignore that they are taking place. As men and women move into modern towns, their relationships with their descent groups are inevitably weakened to some degree... An important factor in West Africa is that the migration to the towns has so far been on a relatively small scale; the majority of the people remain behind in their traditional compounds, and the descent groups survive as viable units. Were there not such, they would lose, at an even faster rate the allegiance of the absent members [10].

In this study it is overwhelmingly evident that the role of the family in making decisions which bind individuals within it has not undergone any discernable change. In other words, the authority of the family over individuals is almost intact and unthreatened. Again, the fact that 38% of the family heads interviewed approved hospitalization of individual patients before informing the family may not be

regarded as a slackening of the family authority over individuals. Rather, such action as was said earlier may be prompted by the family's desire to conceal the news of an individual's illness. Quite often an individual's illness is concealed so as not to attract the evil forces of enemies which many rural people in developing countries superstitiously believe can be responsible for the sudden death of a sick person. The fact that the study focused on the rural families may explain the high incidence of familism with regard to the hospitalization of sick family members. As mentioned earlier, allegiance to family norms is more pronounced in rural than in urban areas. But in order to confirm this, a comparative study is required. Also the fact that patients and individual family members aged 0-19 constituted 58.8% and 53.8% respectively may further explain the heavy dependence on the family decision for the hospitalization of sick family members. The point is that in the rural areas, individuals rarely ignore the family as the locus of authority. However, it is noteworthy to mention here that the younger and more educated family heads are not favourable to the continued dominance of familism compared with older and less educated family heads in our sample. Unfortunately, however, the younger and more educated family heads are less likely to remain in the rural areas. Thus it would be misleading and unreliable to use the few educated and younger family heads as an index of change in familism.

In reality, since in rural areas individuals cannot detach themselves from their families, and since in practical terms the family provides useful economic, social, emotional and psychological functions to individuals, it is difficult to see how the family will lose its grip on the individuals, at least in the foreseeable future. Even in the United States of America where both rural and urban families are said to be becoming less patriarchal and more equalitarian, it has also been acknowledged that rural families today are probably still more patriarchal than urban families [11].

It is thus suggested that in dealing with rural people, whether in the matter of health or in other planned programmes of change, the individuals alone should not form the focus of expert-client relation, as a decision unilaterally taken by an individual may be nullified by the family.

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SOCIO-ECONOMIC CHARACTERISTICS OF AN AMAZON URBAN HEALER'S CLIENTELE

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Abstract—After a decade of analysis of urban Amazonian folk healing, the author conducted a field study in the city of Pucallpa, Peru, by interviewing the total client population of one folk healer during a month's period. The author examines data on socio-economic and ideological characteristics of this population, and documents close correspondence of patients and healer with regard to their general view of etiology of illness and treatment, using the results of the questionnaire data.

Scholars interested in health and illness in cross-cultural perspective, and aware that the great majority of the world's peoples today have recourse to non-medical healers, propose a number of explanations to account for the successes and failures of such practitioners. The general consensus of opinion concerning therapeutic success seems to be that both patient and healer live in the same cognitive world, sharing the same tenets of belief. Often we hear about the "omnipotence of the healer", who like his shamanic forebears, succeeds by means of faith engendered in him by an adoring public quick to laud his successes, and even quicker to forget his failures. Others like Moerman [1] analyze the relationship between symbolic manipulation and neurophysiological processes to explain healing.

Far too often, healers accessible to scientists who wish to test such hypotheses are public figures, "discovered" by the media or by some scholar who has proceeded to help merchandise the healer's skills. A number of cases could be cited, with American and European television specials or spectacular films made for a credulous foreign public. Gaining research access to a credible healing milieu to test a number of hypotheses becomes difficult. Suspicion on the part of traditional healers, who in many cases operate at the margin of the law, further impedes confidence.

During research on Amazonian healing, focusing on plant hallucinogens, I established contact in 1969 with an urban healer in Pucallpa, Peru, don Hilde. Subsequently related to him through marriage to his eldest son, we maintained close contact over a ten year period, during which time I analyzed field data on healing in the northwestern Amazonian city of Iquitos (2-10). During a six month sabbatical in 1977, I visited Pucallpa in the central Amazon and lived in don Hilde's clinic for two months, observing at close range the healing he offered to the public. In 1978-9, as Director of an American overseas student group, I spent the year in Lima, working with a mystical organization to which don Hilde belonged, and in February, 1979 I gathered data by interviewing the total population of patients who visited don Hilde's clinic day and night for treatment.

This paper will examine in close detail what the medical historian, Ehrenwald [11] has titled doctrinal compliance between patient and healer. As early as 1958, Ehrenwald argued that the global success of traditional healers was due to the phenomenon he called "doctrinal compliance" which existed between a healer and his patient, either at a manifest or latent level. The success or failure of healing was attributed to the shared cognitive world in which both lived, and particularly the clients' propensity to manufacture symptoms and to manifest beliefs in agreement with those of the healer. This phenomenon was seen to occur due to shared enculturation.

The present study will document close correspondence of patients' and healer's general views of illness etiology and treatment, using the result of questionnaire data. It will also present an overview of socio-economic characteristics of the healer's clientele. In the author's earlier studies of Amazonian folk healing that used plant drugs such as ayahuasca (various *Banisteriopsis* spp.) I described the cognitive world in which both patient and healer interacted (*loc cit.*) From an affective perspective, one could also point to the emotional effect of plant drug alkaloids given in the ayahuasca drink imbibed by patients. This enables healers to be effective in treating psychological and emotional illness, since the potent plants they employ alleviate their patients' anxieties accompanying the psychosomatic illnesses they frequently suffer.

In 1979, with the full cooperation of don Hilde, I undertook a field study of the total patient population in his clinic. In the course of a month, 95 patients visited him. Patients averaged three visits. Children under the age of seven comprised 53% of the population. The presenting illnesses of the adult patients included somatic disorders, illnesses attributed to witchcraft and overtly psychological problems. A profile of the social, economic and ideological characteristics of the 95 patients (or in the case of young children, their parents who chose to bring them to a healer) will be presented. The particular beliefs to which don Hilde adheres are part of a mystical tradition which mixes native New World beliefs with Hindu and Eastern esoterism. The data to be presented will demonstrate that one need not refer to patients' knowledge of, and participation in these beliefs and rituals to explain the success of the clinic. Rather, patients' beliefs about the omnipotence of the healer and their faith in his abili-

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ties, whatever the "system", appears to be the key to understanding this context of healing.

This paper will focus on don Hilde's patient population and leave for future analysis the complex belief system to which he adheres. Nonetheless, the interview data clearly show that most of the patients haven't the foggiest notion of what is going on around them. Nor does don Hilde manipulate verbal symbols as in tribal or shamanic healing, commonly discussed in the ethnopsychiatric literature [12]. Rather, patients seem to place their faith in the sanctity of the healer, his obvious and supposed access to more-than-human realms by means of his ritual activity, his knowledge of plant drugs and herbs, his simple lifestyle and his low fees.

This paper will first give background information on Amazonian urban healing and on don Hilde. His biography and work as an ayahuasca healer will be discussed, as well as his entry into "Septrionismo de la Amazonia", a mystical-philosophical group, headquartered in Lima. I will then discuss the method of study and give the results of my interviews.

BACKGROUND INFORMATION: AMAZONIAN URBAN HEALING

During 1968-9, I spent a year studying folk psychotherapy with ayahuasca in Iquitos. Here, as in many other areas of Peru, various plant hallucinogens have had a long history of use in healing. The ayahuasca drink is often mixed with other plant hallucinogens and administered to Mestizo patients. Healers called ayahuasqueros, work in the evening, holding treatment sessions in isolated clearings in the rain forest, or occasionally in wood shacks in the city or its outskirts. Treatment of illness is set within a matrix of magical beliefs concerning disease etiology. Many of the illnesses marking the urban populations of the rain forest can be classified as emotional or psychological in origin and respond to ritual curing in a way that corresponds to the general success that folk healers around the world appear to have in treating such disorders [13]. As I described such activities in 1971, "illness is believed to be caused by the capricious whim of offended spirits of nature, or else attributed to the evil of people, who for motives of envy, revenge or plain meanness, pay a witch to cause horrendous damage to another person. The main purpose of the powerful plant hallucinogen ayahuasca when used in healing is diagnostic and revelatory. During the course of the therapeutic session, a patient is given a drink to induce visions which will permit him to see just what force or individual is deemed responsible for evil-doing. It is only then that the evil magic causing illness is believed to be deflected or neutralized by the healer and returned to its perpetrator" [14].

Don Hilde differs from the 10 other healers with whom I worked in 1968-9 in one major aspect. His roots, as we will see shortly, are much more directly Christian and Western in nature. Moreover, he has been able to entertain personal visionary experiences generally denied to others around him from his adolescent years on, and would be probably closer to a seer than an ayahuasquero found in surrounding rain forest communities. While most urban ayahuasqueros

depend upon their plant hallucinogenic potions to "see", don Hilde's abilities as a visionary preempt his dependency upon the ayahuasca potion.

BACKGROUND INFORMATION: DON HILDE

A 63-year-old Mestizo, don Hilde was born in a small hamlet near Pucallpa and obtained only a few years primary education in the city. He served in the Peruvian army in the mid-1930s, and worked as a construction hand in building the Basadre highway connecting Pucallpa with the Andean highlands and the industrializing coastal region between 1937-1939. He married and settled down in Pucallpa, had three children and worked as a carpenter. As the result of a series of visions of Christian saints which began in his adolescence, he realized his abilities to heal, and began to receive a few patients in his home, while simultaneously maintaining his carpentry shop. As his reputation spread over the years, he devoted more time to his practice, occasionally using the plant hallucinogen, ayahuasca, as did many other curers in the region. At this time, he also began to read about hypnosis and to induce trance-like states in himself. In 1974, he gained contact with members of the mystical order, "Septrionismo de la Amazonia", in Pucallpa and was accepted as a member. In 1976, he moved his clinic to the outskirts of Pucallpa and a large sign on the front of this house announces his relationship with the mystical-philosophical organization.

Drawing upon the constant and continuing help of the spirit guide under whose protection he was placed when accepted into the group, he resorted less and less to the use of ayahuasca in his healing. He now pulses his patients when he first interviews them. He does not question them about their symptoms but uses intense concentration as he passes his hand over the patient's head to read their electro-magnetic energies. This enables him to understand whether the illness is natural or related to witchcraft. He spontaneously enters into an altered state of consciousness and supplements his diagnostic intuitions by visions during the meditation ceremonies he holds every Tuesday. Further diagnostic insights come from the ayahuasca session he conducts three or four times a month.

By means of exercises, including yoga-like breathing and the displacement of energies which he learned from his Septrionic confreres, he practices "spiritualist" healing. Although the Order denies that it is a religion, it acknowledges the existence of a Father Creator and sees its mission as one of serving mankind. Don Hilde grows a number of medicinal plants in his garden, and he instructs patients to purchase medicines from city pharmacies to bring with them on subsequent visits to his clinic. He generally prepares his medicines in accordance with the demands of each case, picking the plants from his garden, or on occasion, gathering herbs in the outskirts of Pucallpa. He cooks or seeps the herbs in his kitchen, while patients wait in the clinic to be medicated. He does not charge additionally for the plant medicines he uses. On occasion, a difficult or chronic case might require inpatient care. Several small rooms are available in his clinic for this purpose. He refers cases to the hospital when he thinks that surgery is indicated,

and he maintains a cordial relationship with several medical doctors.

BACKGROUND INFORMATION: THE CITY OF PUCALLPA

Located on the banks of the Ucayali River in the Peruvian Tropical Rain Forest, Pucallpa is connected to Lima by a 500-mile long highway, which traverses the Andean highlands and foothills. Founded in 1883 as a small settlement, May-ushin, Pucallpa was the home of Shipibo and Cashivo Indians. Portuguese immigrants colonized the area during its earliest history and were followed by highland Quechua speakers, Mestizo colonizers and acculturated natives from the northern province of San Martin, in a series of successive waves. The rubber boom of the late nineteenth century brought in outside influences especially from Europe and the United States. Today, in the province of Colonel Portillo, whose capital is Pucallpa, there are 119,641 people (as of the 1972 census, cited in [15], with 67,879 residents in urban areas). Unofficial estimates place Pucallpa's population closer to 120,000 at the time of this writing. It is now a sprawling urban agglomerate of mud-baked and muddy streets, difficult for modern cars, trucks and motorcycles to traverse. The large majority of housing is sub-standard, with wood-slate construction and calamine roofing.

Pucallpa is fundamentally a commercial center with a capitalist and pre-capitalist structure. In addition, a tradition-oriented economy of trade and barter exists among the peasantry and acculturated native tribal peoples along the river bank. Numerous extractive industries are linked to Amazonian natural resources such as lumber and oil. The surrounding countryside and river hamlets are composed of small-scale subsistence farmers who bring their meager surpluses to urban markets. Along with Iquitos (a five day boat journey to the north, or 45 minutes by air), Pucallpa is one of the principal industrial centers of the tropical rain forest, with large, medium and small-scale industry including more than 60 factories and over 1000 businesses such as shops, restaurants, garages, and hotels. Recent water and sewage installations and the beginning of street paving mark Pucallpa's fast moving change from urban village to city. No garbage collection exists in many parts of the city so that pestilent odors and vultures are omnipresent. Modern health facilities include one large poorly staffed hospital, and several private clinics. Private medical care is available, but few specialists choose to work in Pucallpa. Middle class men and women often travel to Lima for specialized treatment. Parasitic infections are common. Among infants, weanling distress syndrome is common, and lack of hygiene is a major public health problem, as well as latrine contamination of water sources.

A Jesuit sociologist, San Ramon, has classified the city of Pucallpa into five social segments as follows [16]:

1. Wholesale distributors, independent professionals and executives of foreign industry; high functionaries of administrative-military groups, who

control regional banks; wholesale commerce and principal industrial managers (1%).

2. Wholesaler-businessmen, river traders, public bureaucracy; small-scale shopkeepers; large farmers and cattlemen (10%).

3. Small-scale wholesalers; hamlets' large scale land-owners; independent workers; technicians; urban artesans (14%).

4. Laborers, peddlars, lumbermen, domestic servants (50%).

5. Marginal people, acculturated native peoples; prostitutes, vagabonds (25%).

BACKGROUND INFORMATION: "SEPTRIONISMO DE LA AMAZONIA"

Founded in 1968, and originally known as Brahmanismo-Lamaismo de la Amazonia, the mystical-philosophical organization is directed by its 43-year-old founder, Claudio Cedeño. Cedeño's followers are an aggregation of middleclass urbanites. A number of his doctrines vaguely resemble theosophical and other Western versions of Hindu beliefs. God is a conjunct of energies. The desire is to combine modern science with mystical beliefs. Common ground is found with parapsychics [17] and parapsychology, and with Kardec's spiritualist writings [18]. The Order has several hundred members and its centers in Peru are in Huanayo and Pucallpa, but other centers are in Cochabamba and Sao Paulo. The Order aims to present a new interpretation of the universe that will help members find the divine in their daily life and in nature. Claudio Cedeño has published books and pamphlets delineating Septrionic doctrines. Members are initiated and ranked in a hierarchy within the group. Septrionismo is a set of practical techniques to permit members to achieve spiritual peace and harmony in their daily affairs.

Don Hilde has studied with the founder and his wife in Pucallpa, and he participated in two annual conferences which brought together members from all of the centers. He prays to a spirit guide made known to him when he joined the Order. He is well-versed in the tenets of the group. He reads its publications avidly, and listens to tapes brought from Lima to Pucallpa which discuss aspects of the Order's doctrines.

METHOD

During October and November, 1977, I moved with my husband and children into don Hilde's clinic. I visited with patients and taped don Hilde's biography. Prior to the second period of fieldwork in February 1979, when I and my family again lived in Pucallpa, I spent three or four evenings a week for six months as a participant observer, attending lectures on doctrine and participating in the weekly meditation ceremonies in Lima. I also attended weekly classes to learn breathing and healing exercises after being formally admitted into the Order in 1978.

With the help of a student assistant, I interviewed patients in don Hilde's clinic. As the healer's daughter-in-law, my place in the clinic was unquestioned. A mimeographed, structured interview lasting 25 minutes was administered. Occasionally, don Hilde told

Table 1. Summary interview data: females ($N = 68$)

Prior use of medical doctors		%
Recent*	33	48.5
Past	20	29.4
No use	15	22.1

* Within last six months.

Average medical expenses last illness ($N = 53$)

No data	S/40-S/500*	S/501-S/1500	S/1501-S/5000
20	3	7	11
S/5001-S/10,000	S/10,000+	Charity patients	
1	5	6	

* At the time of the study, U.S.\$1 = 195 soles in Peruvian currency.

Knowledge of healer's fees ($N = 68$)		%
Yes	42	61.7
No	19	27.9
Uncertain	7	10.3

Fees patients expected to pay ($N = 68$)

S/30-S/100	S/101-S/500	S/501-S/1000	Uncertain
34	3	0	25
By donation		Charity patient	
1		4	

timid or anxious patients to cooperate. My role was similar to that of a nurse who obtains an initial medical history. In fact, the patients' experiences in the clinic resembled experiences when they consulted a medical doctor. 71% of those interviewed had previously consulted medical doctors (see Tables 1 and 2, and Appendix A for the English version of the interview schedule). In fact, Press' article on dual use of both physicians and curanderos in urban Latin America is quite applicable in Pucallpa [19-21]. During the course of the month, we interviewed 95 adults who were patients or the parent of a child patient. 53% of the patients were children under seven for whom we questioned the parent. Three ayahuasca sessions, generally held on Saturday night and lasting until the early hours of the following morning were observed, as well as four meditation ceremonies held on Tuesday nights. The author interacted freely with patients. All urban sectors of Pucallpa were represented, including people from hamlets within a few hours' travel from the city. Tables 1 and 2 summarize the data on prior use of medical doctors, the average medical expense for the last-remembered illness, the fee that patients expected to pay and their knowledge of don Hilde's charges. He does not name a fee but allows the patient to decide the amount. At the time of the study, the minimum wage for a laborer was 385 soles a day. In Pucallpa, and in Lima, medical consul-

tation fees without medication ranged from 500 to 1000 soles a visit.

February was not unusual when compared to my first visit in October and November, 1977. It is the beginning of the rainy season, but at the time of the study, it was dry and thus weather did not impede patients. The clinic is three kilometers from the center of the city and poor quality, unpaved roads make access difficult in the rainy season.

Chi-square tabulations were run on 23 different pairs of variables. In all Tables, when any cell had less than 10 cases, a Yates correction was used. After the interviews were completed, don Hilde went over the patient's history with us, indicating his diagnosis and treatment. We have used his diagnostic system rather than the categories of cosmopolitan medicine. The data will indicate that he and his patients share the same beliefs concerning etiology of illness (see Table 3).

RESULTS

We should first focus on the major question of this study: does the patient (or his parent) share the same cognitive world with the healer? Do don Hilde and his client concur in the diagnosis of the illness? Don Hilde's diagnoses were divided into two groups: natural and non-natural. The second category include

Table 2. Summary interview data: males ($N = 27$)

Prior use of medical doctors		%
Recent*	9	33.3
Past	6	22.2
No use	12	44.4

* Within last six months.

Average medical expenses last illness ($N = 15$)

No data	S/40-S/500*	S/501-S/1500
5	0	2
S/1501-S/5000	S/10,000+	Charity patients
1	2	0

* At the time of the study, U.S. \$1 = 195 soles in Peruvian currency.

Knowledge of healer's fees ($N = 27$)		%
Yes	10	37
No	16	59.2
Uncertain	1	3.7

Fees patients expected to pay ($N = 27$)

S/30-S/100	S/101-S/500	S/501-S/1000	Uncertain
5	1	2	17
	Donation	Charity patients	
	2	0	

illnesses we refer to as culture-bound or reactive syndromes, and to psychological dysfunction.

We hypothesized that concurrence existed between the patient's presenting symptoms and don Hilde's diagnosis. The data in Table 3 confirm this. Patients, themselves, would use the names of the culture-reactive syndromes when asked by us why they came to see don Hilde, to describe what was bothering them. Periodically, we would go over the patients' questionnaires with don Hilde to obtain his diagnosis of the illness. Close correspondence at the 0.05 level of sig-

nificance occurs in the congruence between healer and clients concerning the diagnosis of illness.

From this finding, we asked the question: is there a relationship between classification of illness and socio-economic variables in the client population? Since the median age of the adults we interviewed was 30 years, we divided our sample into two groups—under 30 and over 30. Table 4 shows that no relationship existed between age and classification of illness. All age groups were represented in natural and non-natural illness. Since many of the questions concerned

Table 3. Patients' symptomatology and healer's diagnosis

	Healer's diagnosis: natural illness	Healer's diagnosis: non-natural illness	
Presenting symptoms of somatic dysfunction	58	12	70
Presenting symptoms of non-somatic dysfunction	1	24	25
	59	36	$N = 95$

$\chi^2 = 48.46$.
 $P = < 0.001$.

Table 4. Age of interviewee and classification of illness

	Natural illness	Non-natural illness	
Under 30	31	19	50
Over 30	28	17	45
	59	36	N = 95

$$\chi^2 = 0.0004.$$

P = NS.

Table 5. Sex of adult interviewee and classification of illness

	Culture-bound illnesses	Psychological illnesses	
Men	10	4	14
Women	15	7	22
	25	11	N = 36

$$P = \frac{0.2299}{0.8091} = 0.2841 \text{ (NS).}$$

data on the adults interviewed, we have indicated age differences in other Tables.

Next, we asked if the sex of the adult interviewed was related to the classification of illness. During an earlier study, I had observed that far more women than men sought recourse to ayahuasca healers. Thus, we predicted that a greater number of women than men would suffer illnesses linked to witchcraft. Table 5 shows that this was not the case. The proportions of men and women suffering from culture-reactive syndromes as opposed to psychological dysfunctions are not significantly different in proportion to their numbers, using a Fisher's *T*-test of significance.

Considering the significant changes occurring in Amazonian society and particularly in Pucallpa, we thought that the more highly educated individuals would suffer less significantly from culture-reactive syndromes. The data in Table 6 reject this hypothesis. There is no relationship between the educational level

of the patient and the reactive syndromes, again using a Fisher's *T*-test of significance.

With regard to the frequency of visits to the healer, we hypothesized that natural illnesses would be significantly quicker to respond to treatment than non-natural illnesses. No relationship between the frequency of visits and classification of illness could be discerned at the 5% level (see Table 7). Nonetheless, few patients came to see don Hilde for an illness for any extended period. His healing was short-term, direct and crisis-oriented.

When we looked at religious affiliation, there was no statistically significant relationship between Catholic, Protestants or non-affiliated individuals and classification of disease (see Tables 8 and 9). Based on earlier interviews with ayahuasca patients in Iquitos, I expected individuals who suffered from non-natural illnesses to use ayahuasca [8]. Earlier research indicated that when people attributed illness to witchcraft they frequently sought ayahuasca healers to identify the responsible person or spirit. The data in Table 10 show this not to be the case.

Tables 11 and 12 give information on the diagnoses of adult and child patients. Don Hilde considers culture-bound syndromes to include saladera, daño and mal aire, but he considers susto (fright) to be a natural startle response to stimuli. I have described saladera earlier and in a recent article [8]. Salt and other noxious agents are made into a paste and placed over one's threshold or slipped as a potion into a drink to cause bad luck. Daño is another well-recorded culture-bound syndrome. In this case, the evil will of a witch or a noxious potion is placed in a beverage and given to an individual. Mal aire, a child malady, is caused by malignant psychic forces which parents unintentionally bring home from the street. Psychological ail-

Table 7. Frequency of visits to healer and classification of illness

	Natural illnesses	Non-natural illnesses	
Initial visit	23	15	38
Various visits	36	21	57
	59	36	N = 95

$$\chi^2 = 0.067.$$

P = NS.

Table 6. Education and type of illness suffered

	Culture-bound illnesses	Psychological illnesses	
Primary completed or less	9	5	14
Secondary completed or less	16	6	22
	25	11	N = 36

$$P = \frac{0.1609}{0.6472} = 0.2486 \text{ (NS).}$$

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Table 8. Religion and classification of illness

	Catholic	Protestant	
Natural illnesses	43	8	51
Non-natural illnesses	24	5	29
	67	13	N = 80

$\chi^2 = 0.0179$.
P = NS.

Table 9. Religion and classification of illness

	Catholic	No affiliation	
Natural illnesses	43	8	51
Non-natural illnesses	24	6	30
	67	14	N = 81

$\chi^2 = 0.038$.
P = NS.

Table 10. Ayahuasca use and classification of illness

	Natural illnesses	Non-natural illnesses	
Personal use of ayahuasca	21	10	31
No personal use of ayahuasca	38	26	64
	59	36	N = 95

$\chi^2 = 0.621$.
P = NS.

ments is a category I have created for illnesses that are not thought to be culture-bound, yet the healer considers to be non-natural. They include two requests for which don Hilde refused to bewitch others, two requests for fortunetelling, the exorcism of a house, marriage counseling, drug abuse counseling (for cocaine paste smoking), and a case that appeared to me to be chronic schizophrenia.

We asked about the length of the patient's illness prior to the interview, and distinguished between illnesses more or less than six months' duration. Table 13 shows that non-natural illnesses tend to be more chronic than natural illnesses. Table 14 shows that there was a statistically significant relationship between attendance at Tuesday rituals and classification of illness. 75 of those interviewed have never attended any meditation ceremony. Of this group, 52% presented with symptoms of a natural genre. Another 22% of the total clients interviewed also did not attend, but suffered non-natural illnesses. Only 25% of the total clients interviewed attended the meditation ceremony. Of this group, 62% had non-natural symptomatology. 9% of the total patients who attended the meditation ceremony presented with a natural diagnosis. Don Hilde often advises patients

with non-natural illnesses to attend a meditation ritual, although not all do so.

Don Hilde's reputation does not derive merely from his use of ayahuasca. He attracts patients without any particular interest in the plant hallucinogen. Nonetheless, we were curious to see if there was any relationship between the age of his clients and their personal use of ayahuasca. Given the rapid culture change occurring in Pucallpa over the last 10-15 years, we hypothesized that, in keeping with prehistoric patterns [18], more men than women would use ayahuasca. Data in Table 16 show a statistically significant relationship at the 0.01 level.

SOCIOECONOMIC DATA

One of our major concerns was to obtain a socioeconomic profile of male and female clients, difficult to find in the literature on folk medicine. We found that there was no significant relationship between sex and level of education (see Table 17). Table 18 delineates data on marital status. Unlike the data I gathered in Iquitos in 1968-9, don Hilde's clientele exhibit generally stable marital patterns. The large majority of those interviewed were married. We asked if there was a relationship between the sex of interviewee and marital stability: data in Table 19 shows no significant difference.

With regard to education and occupations, Table 20 displays the data on 68 women and Table 21 on 27 men. According to San Ramon (*loc cit.*), most individuals in our population would fit in the middle three pentads of his five scale system, with the fourth, laborers, peddlars, domestics and the third, small-scale wholesalers, independent workers and urban artisans most representative. Of the 36 housewives in the sample, their husbands' occupations are not much different from those listed in Tables 20 and 21.

Table 11. Diagnosis of adult patients (age 15-75, N = 45)

Natural	13	28.8%
Culture-bound:	21	46.6%
—Saladiera	8	(38.1%)
—Dano	13	(61.9%)
Psychological:	11	24.4%
—Requests for bewitching	2	(18.1%)
—Fortunetelling	3	(27.2%)
—Exorcism, house	1	(9.1%)
—Marriage counseling	2	(18.1%)
—Chronic schizophrenia	1	(9.1%)
—Drug abuse	2	(18.1%)

Table 12. Diagnosis of child patients under age 7 (N = 51)

Natural (includes 6 cases of susto)	47	92.1%
Culture-Bound (includes 2 cases of mal aire and 1 case of saladiera; 1 case of daño.)	4	7.8%
Psychological	0	—

Table 13. Length of patient's illness and classification of illness

	Recent illnesses	Non-recent illnesses	
Natural illnesses	27	32	59
Non-natural illnesses	6	30	36
	33	62	N = 95

$$\chi^2 = 7.114.$$

$$P = <0.01.$$

Table 14. Classification of illness and patients' attendance at meditation ritual

	Attendance at meditation ritual	No attendance at meditation ritual	
Natural illnesses	9	50	59
Non-natural illnesses	15	21	36
	24	71	N = 95

$$\chi^2 = 6.921.$$

$$P = <0.01.$$

Traditional healers in Pucallpa generally obtain patients from personal referrals. When asked how they learned about don Hilde's clinic, many people told us at length about a friend, relative or neighbor who had been treated successfully by don Hilde and who had recommended him. Often that individual would accompany them to the clinic and on a number of occasions, I was introduced (see Table 22).

From earlier research, I expected men to have recourse to medical doctors in greater proportion to their numbers than women. In Iquitos, women expressed fear of medical doctors. However, in Pucallpa, this was not the case. More women than men had made prior use of physicians. This may be due to childbirth experience rather than illness, judging by the comments during the interviews. Table 23 displays this data. We thought the higher the patient's educational level the greater the probability that he would consult medical doctors and not healers or herbalists. The data in Table 24 do not show this to be the case. This is not unexpected, however, since people from all segments of society express low opinions of the doctors who practice in Pucallpa.

Table 15. Personal use of ayahuasca and age

	Under 30	30 +	
Personal use of ayahuasca	14	17	31
No personal use of ayahuasca	44	20	64
	58	37	N = 95

$$\chi^2 = 4.887.$$

$$P = <0.05.$$

WITCHCRAFT BELIEFS

We were able to gather data on clients' personal experiences of witchcraft, or their knowledge of the experiences of close relatives. From the initiation of my studies on Amazon healing, I have been surprised at the willingness of people to discuss their witchcraft fears and experiences with a stranger such as myself. In this respect, Pucallpa resembled Iquitos. I anticipated that there would be no relationship between the sexes in their experience of witchcraft. This was not the case, however. The data in Table 25 points out clearly ($P = 0.0001$) that women were more likely to have had a personal experience of witchcraft or to have had knowledge about the experience of a close family member. However, there was no relationship between age and personal experience of witchcraft. These data in Table 26 are surprising. One might have thought that rapid culture change, increasing educational achievements, and access to the mass media including a television channel would cause witchcraft beliefs to diminish.

We asked about the context in which treatment for witchcraft occurred, reasoning that there would be a relationship between this activity and a friend's or spouse's knowledge that the patient visited the healer

Table 16. Ayahuasca use and sex

	Yes	No	
Male	15	12	27
Female	16	52	68
	31	64	N = 95

$$\chi^2 = 9.017.$$

$$P = <0.01.$$

Table 17. Sex of adult interviewed and education

	Male	Female	
Primary completed or less	11	40	51
Secondary completed or less	16	28	40
	27	68	N = 95

$$\chi^2 = 2.541.$$

P = NS.

Table 18. Marital status of adults interviewed

	Males (N = 27)	Females (N = 68)	Total (N = 95)
Married	19 (70.3%)	56 (82.3%)	75 (78.9%)
Single	8 (29.6%)	10 (14.7%)	18 (18.9%)
Other*	—	2 (2.9%)	2 (2.1%)
Spouses live together	16 (84.2%)	52 (92.8%)	68 (90.6%)
Spouses live apart	3 (15.7%)	4 (7.1%)	7 (9.3%)

* This includes 1 widow and 1 single mother with no spouse.

Table 19. Marital stability and sex of adults interviewed

	Male	Female	
Live apart	3	4	7
Live together	16	52	68
	19	66	N = 75

$$\chi^2 = 0.439.$$

P = NS.

for this purpose. These questions were the most difficult ones to obtain data about. They were an obvious concern to the people we interviewed. A number of them chose not to respond. Tables 27 and 28 give the results of the inquiry. Individuals suffering from non-natural illnesses were less likely to tell one or more of their friends of their visit. This confirms the impression of secretiveness about witchcraft fears and hesitancy to make open accusations. We found a statisti-

cally significant relationship between the classification of illness and the spouse's knowledge of the visit. Adults who suffered natural illnesses or brought children suffering from natural illnesses were much more likely to tell their spouse of their visit than those with symptoms they attributed to witchcraft. Table 29 shows that clients with little or no belief in witchcraft tend to present overwhelmingly with somatic illness, while those who have a strong belief in witchcraft tend to present with witchcraft symptoms ($P = 0.01$). Table 30 shows no relationship between knowledge of don Hilde's meditation sessions and the sex of the adult interviewed. In fact, only 25% of his patients had attended a meditation ceremony, and only 2% had the slightest knowledge of Septrionic doctrine.

SUMMARY

In summarizing the results of this study, we see that age made no difference in the type of illness that

Table 20. Education and occupation of females interviewed (N = 68)

Occupation	Education	
	Elementary	Secondary
Unemployed, no spouse and family supported		1
Charity		1
Sales, market or peddler	9	5
Housewife, husband employed	25	12
Student		2
Agricultural worker	3	1
Secretary or office worker		2
Cook		1
Seamstress	1	2
Laundress	1	
School administrator		1
Teacher's aide	1	

Table 21. Education and occupation of males interviewed (N = 27)

Occupation	Education	
	Elementary	Secondary
Unemployed		2
Agricultural worker	2*	1
Laborer	1	2
Stevedor	1	
Food wholesaler		1
Welder	1	
Plumber	1	
Mechanic	1	
Handyman		1
Retail grocery sales		2
Small-scale businessman	2	1
Paramedical worker		1
Printer		1
Office worker	1	1
Government office worker		1
Teacher		1
Student		2

* One subject was illiterate.

Table 22. How clients learned about don Hilde's clinic (N = 95)

Relative was a patient	26	27%
Friend was a patient	20	21%
Neighbor was a patient	25	25%
Casual recommendation	8*	8%
Work colleague was a patient	1	1%
Through compadrazco ties	9	9%
Patient was a former neighbor	1	1%
Member of Septrionic Order	1	1%
Long time association	3	3%
Relative of Healer	1	1%

* In one case, a total stranger recommended don Hilde.

patients brought to the clinic. Men and women did not differ significantly in the types of illnesses they presented. No relationship existed between the educational level of the client and witchcraft-related illnesses, nor was there a relationship between the frequency of visits to the healer and classification of illness. Clearly don Hilde practices a short-term, crisis-oriented form of healing. There was no relationship between religious affiliation, or the personal use of ayahuasca and classification of illness.

Clients with different educational attainments were not partial to medical doctors. An obvious source of bias in this respect is that they were attending a folk healer's clinic when interviewed. Witchcraft experience was not a function of age. Neither men nor women were more knowledgeable about the healer's meditation rituals. Both healer and patient lived in the same cognitive world and defined reality in the same way. Those with strong beliefs in witchcraft presented with symptoms relating to culture-reactive illness, while those without strong beliefs in witchcraft presented overwhelmingly with symptoms of natural disorders. Clients suffering from witchcraft were less likely to tell either a friend or spouse. Illnesses caused by witchcraft were more chronic than natural illnesses. Ayahuasca use was diminishing among those under 30 years of age. Women had more recourse to medical doctors than men. Women rather than men were more likely to have had witchcraft experience.

COMMENTS

The data in this study have confirmed Ehrenwald's general discussion about doctrinal compliance and demonstrate that:

- both healer and patient share similar beliefs about disease etiology,
- both healer and patient define illness within similar rubrics,

Table 23. Prior consultation with medical doctor and sex of adult interviewed

	Prior consultation with medical doctor	No prior consultation with medical doctor	
Male	15	12	27
Female	52	16	68
	67	28	N = 95

$\chi^2 = 4.06$.
 $P = < 0.05$.

Table 24. Prior consultation with medical doctor and education of adult interviewed

	Prior use of medical doctors	No prior use of medical doctors	
Primary completed or less	38	12	50
Secondary completed or less	30	15	45
	68	27	N = 95

$\chi^2 = 1.014$.
 $P = \text{NS}$.

Table 25. Personal experience of witchcraft and sex of adult interviewed

	Personal experience or that of close family member	No personal experience of witchcraft	
Male	12	15	27
Female	63	5	68
			N = 95

$$\chi^2 = 24.195.$$

$$P = < 0.001.$$

Table 26. Personal experience of witchcraft and age of adult interviewed

	Under 30	30 +	
Personal experience of witchcraft	46	21	67
No personal experience of witchcraft	7	21	28
			N = 95

$$\chi^2 = 1.354.$$

$$P = \text{NS.}$$

Table 27. Classification of illness and friend's knowledge of visit to healer

	Natural illness	Non-natural illness	
Friend's knowledge of visit	37	12	49
No friend's knowledge of visit	12	16	28
			N = 77

$$\chi^2 = 8.209.$$

$$P = < 0.01.$$

Table 28. Classification of illness and spouse's knowledge of visit to healer

	Natural illness	Non-natural illness	
Spouse's knowledge	36	13	49
No spouse's knowledge	9	12	21
			N = 70

$$\chi^2 = 4.74.$$

$$P = < 0.05.$$

Table 29. Belief in witchcraft and classification of illness

	Natural illnesses	Non-natural illnesses	
Little or no belief in witchcraft	17	1	18
Strong belief in witchcraft	42	35	77
			N = 95

$$\chi^2 = 8.278.$$

$$P = < 0.01.$$

Table 30. Knowledge of esoteric ritual and sex of adult interviewed

	Knowledge of meditation ritual	No knowledge of meditation ritual	
Male	10	17	27
Female	14	54	68
	24	71	N = 95

$$\chi^2 = 2.769.$$

$$P = \text{NS.}$$

(c) healer and client do not participate equally in healing ritual nor equally comprehend healing doctrines.

The data in Table 30 on the client's source of knowledge about don Hilde's clinic indicate one measure of his healing. The total patient population during February 1979 learned about the clinic by a personal reference. This indicates that they had hoped that he would be able to treat their problem. Needless to say, another study remains to be done to examine the efficacy of his techniques and medications. The broader question remains about how patients' understandings of the healer's knowledge affects the outcome of the therapeutic process. The data in this case argue that the rapport between healer and patient and their shared cognitions are the mainstay of ongoing healing activity.

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QUESTIONNAIRE (English Translation)

Date _____ Sex _____ M _____ F _____ Age _____
 Name _____ Married _____ yes _____ no _____
 Do you live together? _____ yes _____ no _____
 Address _____
 Name of patient _____ age _____
 Occupation _____
 (If housewife) spouse's occupation _____
 Education: _____ public school _____ technical school
 _____ public school completed _____ college
 _____ high school _____ other
 _____ high school completed _____
 Why did you come to see don Hilde? _____

 How many times have you come here? _____ first time _____ twice _____ several times _____ frequently _____
 What are the patient's symptoms? _____

 How did you first learn about don Hilde? _____

 What is your opinion about the quality of medical doctors practicing in Pucallpa? _____

 Have you ever been seen before by a medical doctor? _____ yes _____ no _____
 (If answer is yes) Have you seen a medical doctor in the last six months? _____ yes _____ no _____
 What were your average expenditures during your last illness? _____

 How much does don Hilde charge? _____
 Does your spouse know that you came here today? _____ yes _____ no _____
 What do your friends think about your visit(s) to don Hilde? _____

 When did the patient begin to suffer? _____
 What Church do you attend? _____ none _____ Roman Catholic _____ Evangelic _____ Adventist _____ Espiritista
 _____ other _____
 How frequently do you attend? _____ never _____ at times _____ frequently _____ several times/wk. _____
 Does your family attend too? _____ yes _____ no _____
 People here have told me a lot about witchcraft in the rain forest. Can you tell me a little bit about that too? _____
 Have you ever used ayahuasca? _____ yes _____ no _____
 How many times have you taken it? _____
 Why did you take it? _____

 Do you attend Tuesday night meditation ceremonies? _____ yes _____ no _____
 How frequently? _____ never _____ once _____ several times _____ very frequently _____
 (If the answer is yes) Can you describe your experiences after the meditation? _____

 Would you explain to me something about the doctrine of Brahmanism-Lamaism, also known as Septrionism? _____

 Don Hilde's Diagnosis: _____

 Don Hilde's plan for treatment: _____

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TRADITIONAL CONCEPTS AND CUSTOMS ON PREGNANCY, BIRTH AND POST PARTUM PERIOD IN RURAL KOREA

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Abstract—This paper presents some preliminary results of a more extensive study on traditional childbearing behavior in rural Korea and its relation to modern maternity and obstetrical care. It is the result of team work between an obstetrician, a medical sociologist and public health specialists. The geographic area of study was Kangwha District, Kyunggi Province, where C. Osgood did his anthropological study on "The Koreans and their Culture" in 1945 [1]. The study was motivated by the observation from literature, that in spite of economic progress, modernisation, and increased availability of care, the utilisation of modern obstetrical and maternity care in rural Korea had increased only little between 1969 and 1978. The findings from literature were supported by results in the maternity care component of the Yonsei University Kangwha Community Health Project. Acquisition of TV had risen faster than the utilisation of trained attendants at birth within the project area. To upraise the behavioral background for these findings a childbearing behavior study was done on 30 rural families with a pregnant woman throughout pregnancy, childbirth and post partum period. Traditional behavior and interactions with modern health services were documented. Information was obtained by open taped interviews with relevant persons in families, neighborhood and health services and by participant observation. The study was structured by a working paper with items for investigation obtained at first from literature and observation on traditional childbearing behavior. This was continually updated with new relevant information from the study. It became possible to identify a "traditional birthing system". Some relevant aspects of this "traditional Korean birthing system" are presented in this paper: (1) traditional concepts about the physiology of childbearing; (2) course of pregnancy in the rural family; (3) observations on delivery; and (4) post partum concerns in the family.

INTRODUCTION

In rural Korea conditions surrounding birth have changed little during the last 15 years. This can be documented from literature [2] and in the basic care project of Yonsei University in Kangwha District [3]. Between 1974 and 1977 each household had been linked with the existing medical care system with special emphasis on maternity care, free provision of midwife attendance and repeated motivational visits to each household with a pregnant woman to solicit qualified delivery attendance, and for risk screening and referral. When the project was evaluated, midwifery attendance at birth had not risen substantially and this could not be explained by economic reasons, since, apart from customary small gifts to the attendant, midwife services were free of charge. During the project period the rate of TV acquisition, a much greater expense to the household, had risen considerably faster than that of qualified delivery attendance. Subsequently the hypothesis was forwarded that stereotyped educational messages and service provisions on cosmopolitan medicine were not sufficiently modified in accordance with cultural needs in order to become effective.

METHODOLOGY

An ethnographic study was designed to throw light on this issue. The project area in Kangwha district (where C. Osgood did his study in 1945 [1]) the townships of Sonwon and Naega, had a population of 13,000 with approximately 250 births annually. The

sample universe consisted of all women in the area who became pregnant between September 15th and December 15th 1977, in other words, who were expected to give birth between May and September 1978, and who were registered with the project by March 15th 1978. Registration was done by the village workers of the project on their routine bi-monthly household visits. The possible registration bias was controlled by differentiating between those women who were registered in early- and those who were registered in late-pregnancy. No crucial differences in their characteristics could be documented. 30 women and their families were selected. They were scattered over 14 of the 20 villages in the target area, with between 1 and 4 cases per village. Their families were predominantly farming, some were fishing, but there were also families of drivers, teachers and workers. Their economic conditions reflected well with the distribution of all households in the target area on the socio-economic scale.

The focus for the study was the family since observation indicated that decision-making power resides with the family on issues concerning the procreational cycle. Prior to first contact all available information on each household was compiled from household records, maternity records, from health workers and from other informants. A baseline catalogue of subjects was compiled for open discussion in each of the families on a suitable occasion during the first 1-3 interviews.

These subjects had been obtained from literature and from preliminary observation as relevant for traditional childbearing behavior. The catalogue was

continually enlarged and adapted as new information was obtained with these discussions. Each household was subsequently contacted between 2-8 times by highly qualified and especially trained researchers to discuss these subjects. These were two highly-trained Korean women, one with a degree in sociology, the other with a degree in nursing. Each of them had one assistant. They established a friendly relationship with the families, conducted behavioral observations and tape-recorded interviews with up to 5 respondents at each contact in the family and neighborhood. 222 taped interviews were made with 302 respondents. Interviews were also conducted with village workers, midwives, physicians and traditional healers.

Observations and transcribed interviews were presented by the interviewer team in weekly sessions to an interdisciplinary (obstetrician, sociologist, public health specialist, occasionally an anthropologist) and intercultural (Korean, German, occasionally American) team of faculty and field staff members. This team discussed all incoming information regularly, so that interview techniques could be adapted and new subjects of interest could be identified and geared towards informants most knowledgeable about them. In this way the investigation was held flexible and capable of absorbing all related information. As a result of this approach, the original catalogue of subjects for study underwent constant change. Items that turned out to have been artificial constructs were discarded. New ones were constantly added, especially since the process of pregnancy, childbirth and post partum period shifted the attention and interest of the informants to new centers of attention. With the progress of maternity new themes constantly became of vital importance, while others lost their attention. Subsequently, although the catalogue of subjects served to structure the investigation, it was itself undergoing constant change. At the end of the investigation, it had provided information on those items that had been of vital interest or concern to the informants at one time or the other during the course of maternity, while items that were of little or no interest to them had been discarded.

A wealth of information on traditional concepts, customs and attitudes concerning traditional childbearing attitudes in rural Korea was accumulated in this manner. The mentioned catalogue of investigated items presented itself at the end of the study with several centers of highly significant aspects of traditional childbearing. These were used as codes for analysis. The materials were translated into English, codified and analysed according to these relevant subjects. From this analysis the 30 cases were reconstructed and compared with the original materials. Then they were used to delineate the "traditional birthing system" for Korean culture. (A culture specific birthing system is hypothesised by Jordan as existing in any culture and was examined by her in four cultures [4].) For the purpose of this paper, some results from the following four areas are selected for presentation.

1. Traditional concepts about physiology of childbearing.
2. Course of pregnancy in the rural family.
3. Observations concerning delivery.
4. Post partum concerns in the family.

RESULTS

1. Traditional concepts about physiology of childbearing

In the beginning there was great reluctance by the informants to talk about traditional concepts of childbearing. Information could be solicited from older informants only with difficulty. But once a relationship of confidence was established and the interviewers sincerity and concern with documenting fast-disappearing traditional concepts and customs was comprehended by the respondents, a wealth of information was brought together from different sources with remarkable consistency of content. This then could be cross-checked with information from other areas of Korea to give a more representative view, rather than that of the target area alone. In summary, the traditional physiology of childbearing is as follows: after conception the baby forms in the womb. Its bones are from the father, and its blood is from the mother. It forms itself around the 4th month of pregnancy from the good blood while the placenta forms itself from the bad blood which otherwise would have been discarded by menstruation. The baby sits upright in the womb on the placenta as a cushion while it holds on to the milk rope and sucks on it in order to grow. This milk rope is not identical with the umbilical cord. It is a maternal organ that at time of birth slips away from the womb and needs three days to relocate at the nipples so that the milk starts flowing. This is why in pregnancy and three days thereafter one has no milk. Once the milk rope slipped away, the time of birth has come. The baby turns in the womb so that the head points downward. This causes the mother pain and is comparable with the first stage of labor. When the membranes rupture, the outflowing waters indicate to the child the direction in which to move, and now the mother can provide support by using her strength and the head becomes visible moving back and forth in the vagina. This is descriptively called "grasping the door" (*mun'eul chabnunda*) and corresponds to the second stage of labor. A very dangerous situation arises if the baby is frightened and moves up again, which may be caused by cold or unwelcoming conditions of the environment. The actual moment of birth is determined by fate and cannot be changed by human intervention. That moment determines the four double characters of hour, day, month and year of birth which will rule the life and fate of the child thereafter. The fertility goddess called Samshin, assigns the fate to the infant according to the conditions surrounding birth. She was little spoken of, but unexpectedly much reverence is still being expressed to her.

The traditional medical profession in Korea disclaims knowledge of the milk rope theory. However, the concept seems to have risen from the buddhist canon. The *tripitaka Koreana* is said to contain, in a saying by the buddha on parental love, a reference to the growth of the child in the womb including the milk-rope theory.

The young mothers in this study did not agree with the traditional concept of childbearing and at times ridiculed traditional knowledge. But they did not have a balance of knowledge of modern physiology concepts of childbearing either.

2. Course of pregnancy in the rural family

The study began with the stereotyped assumption derived from Western clientele, that a pregnant woman is "of good hope", looking forward to a "happy event" and that she is entitled to much attention by her husband, family and the general public.

This stereotype is not applicable to the rural Korean mother-to-be, although in early pregnancy, especially if expecting her first child, she receives much affection from her new family in the beginning. This is not because of herself but because of the baby. The Confucian concept of educating the baby in the Womb—*taegyo*—is of great importance, although not much spoken of. The young mother is enveloped in an encouraging, happy atmosphere in early pregnancy. Everyone in her new family shows affection towards her, she is encouraged to have happy, beautiful thoughts, to look at beautiful sights, to eat beautiful food and engage in beautiful activity. However, with progressing course and in later pregnancy, such attention strangely enough wanes and she is not to expect any special consideration any more. Interference from outside, health services included, are frowned upon. Towards the end of pregnancy she is expected to work hard and behave as if she is not aware of her condition. There is a saying that if a woman does not work hard in pregnancy, she will have a hard time in labor since the baby will grow too big. Young women in late pregnancy, although they may visibly suffer from toxemia, are often encouraged to work in the fields. This difference in behavior of and around the mother in early and late pregnancy needs more detailed study and interpretation.

Practically all women experienced pregnancy as embarrassing. Because of this embarrassment some women stayed at home entirely and others avoided being seen by men or by strangers. The unanimous reason given was that the abdomen protruded so disgustingly and that this was disfiguring. It would be necessary here also, to prove for more convincing, if subconscious reasons. In this context the traditional dress for Korean women is noteworthy. It makes it impossible to tell if a woman is pregnant or not.

While the peripheral environment assumes a hostile character in late pregnancy, the womenfolk become closer to the new bride who entered as a stranger. Mothers-in-law become especially important. Even where the family was nuclear, the mother-in-law was never distant and usually asserted her influence. Under these circumstances modern young city women were observed to become socialized into the traditional family's life style, and most of all, absorb traditional values and attitudes concerning childbearing. This meant, before all other things, to delegate authority for decision-making to the family and become entirely dependent on the judgement of the older generation of what has to be done. Although the Confucian ideal and practice of patrilineal family descent in Korea has been studied in great depth, there may be a female counter-culture centering around birth, not necessary conscious but nonetheless powerful. This has received little scholarly attention. However, it would otherwise be a mystery indeed to find modernized young women succumbing to outdated traditional attitudes, continuing to have one child after another

until they bear the son the family demands, or to find that even the courageous and otherwise outspoken women's liberation movement is oblivious to the fact that childbearing practices continue as they did in the dim past and that the health of mothers is being neglected. A possible explanation may be that childbearing in Korea is a form of initiation and that unconscious respect rather than neglect has prevented modernizers from meddling in this area, without the ability to demonstrate values that are on par with the old ones. A woman bearing her first child is not only initiated into womanhood and motherhood but into her new family as well. And the mother-in-law is the master of ceremonies. A traditional women's culture seems to be at work here, which, if unconscious, is nevertheless powerful and in need of study.

Pregnancy, especially in the later course, is deemphasized towards the outside world, while interactions in the family become enormously intense around the pregnant woman. The pregnant woman experiences herself not so much as an individual but as the pregnant part of the family. The responsible attitude of the family seems to outweigh by far the benefits that the health services can offer her in security. It is here that modern health services are most strongly at odds with the family and the tradition that regards pregnancy neither as an individual affair, nor is willing to have a pregnant woman be considered a patient to be cared for by those who care for the sick.

3. Observations on delivery

The approximate date of confinement was known to all women, but many of them were surprised by birth itself. Several women, although they had given birth before, did not seem to recognize the signs of early labor. One woman was sent by her husband from rice planting in the field to see a doctor because she complained about her aching back. She was surprised to be told that the baby would be born in a matter of hours. Another woman blamed her strong backache on the fact that she had slept on the cold floor, another one thought she may have indigestion. Occasionally one had the impression that birth was an unwelcome interruption of activities considered more important and that the woman tried to hide the fact that she was in labor. One woman sent her husband to the field in the early morning without bothering to mention that she was having contractions. She found herself then in strong labor, without anyone to help. One woman reported having had strong labor pains throughout the night, and that her husband had told her to go to the field in the morning, which she found herself unable to do. The waters broke while she was preparing the breakfast rice, and then everything happened so fast, that her mother could not be called in time to attend her. An old lady reported that her daughter-in-law withdrew after breakfast saying she did not feel well, and a little later she found her already in the crowning stage. Still another woman allowed herself to be scolded by the family because of her restlessness, without admitting that she was in labor. And another young woman was surprised by contractions while working in the field in the morning. She continued working until late afternoon and then barely could make it home.

In almost every statistic about births in Korea there is a column on women having given birth alone. In this study too, there was a woman delivering without anyone attending; she even cut the cord herself. This accomplishment gave her great pride and admiration by others. Other women contemplated the idea of delivering alone during pregnancy. Many of the older informants and mothers-in-law reported of having delivered alone. It is such women, before all others, who qualify for delivery attendants in the traditional sense.

The motif of women for delivering alone or not admitting to being in labor can be understood as an attempt to avoid or to postpone as long as humanly possible the embarrassing stage of birth when she is utterly dependent upon other people. She usually, however, says she wanted to spare others the trouble on her behalf. This behavior is truly part of the Korean rural women's culture. These women do not seem to have any sense of danger. Birthing to them is a fate to be accepted and to be lived through, that she neither could nor would share with another individual. One woman said "if we died, we died and if we lived we lived". The saying goes that "at birth one dies and two are born alive". Some of the materials seem to make it imperative to compare what birth means to women and what the all important ancestor worship means to the men. Both have relations with the spiritual world.

For about half of the deliveries the midwife was called. But this was done rather late in the process of childbirth, and more than once too late for her to attend. The midwives seem to have established their reputation not so much by their obstetrical skills than by their strong mental disposition to guide the household through the disturbing period of childbirth.

There seem to be no rules for delivery, except that a woman should not scream. Otherwise she does whatever is most comfortable for herself. She walks around, clings to people, later kneels or squats during the second stage of labor, being supported by other women or holding to furniture, shelves, or leaning over folded quilts during expulsion of the child. Some mentioned, that they padded the floor with some clothing, so that the baby "falls down" softly, and does not hurt itself. One woman said, that in the old days one used clean straw that later was to be burned with the placenta.

After birth there is no happy celebration in the family. Asked what they felt when they saw the newborn, the mother, attendant and husband most frequently expressed weariness and the burden of having to raise another child. But on occasion a father was overcome by a sense of overwhelming wonder about new life, when he saw his son "fall on the ground and look around with wide open eyes, everywhere".

The goddess of Samshin, the Korean fertility spirit governing also the procreation cycle and the well-being of mother and newborn, was never mentioned in pregnancy, but during childbirth mothers-in-law started praying to her. The role of the spirit evolved to become surprisingly powerful thereafter and the characteristics of this capricious, jealous and powerful spirit reflected quite strongly in the behavior of the families during puerperium.

4. Post partum concerns

A faithfully observed custom after birth was the putting up of little molds of yellow earth, in front of the front door, a practice called *hwangt'o p'iuda*. It indicates the birth of a child and its sex, usually 3 molds for a girl and 5 for a boy. This corresponds to hanging up the straw rope across the entrance, with pine branches and red peppers for a son and with pine branches and charcoal for a girl in most other areas of Korea. The custom is understood by the community as a request not to enter the house and is connected with a powerful belief that an outside intruder, especially a woman mourning the death of a relative, will bring danger to the child and the mother and will prevent the milk from flowing. It is worthwhile contemplating how much this custom that isolates mother, child and family from the outside world for at least three days is indeed creating that relaxed atmosphere which is necessary for the "let down reflex" and the milkflow to start [5]. It also gives the family a chance to reconsolidate, after a very disturbing period, around the new member and the young bride, whose status changed to that of a mother.

After birth the mother is expected to be kept warm, to be protected from "the wind" and to rest for a prolonged time. The very elaborate considerations and attention for the new mother right after birth in order to restore her health make the lack of an equal concern for her health during pregnancy all the more apparent. Barbara Pilsbury has made similar observations in Chinese communities in Taiwan [6]. Good care after birth is said to restore a health problem that existed before even pregnancy occurred. Many women in Korea become pregnant in order to restore their failing health. This was true for three of the women in this study too. On the other hand it is considered to be extremely dangerous for the health of a mother, if the rules for post partum care are not observed as they should. Especially chronic ailments, e.g. stroke and rheumatism, can be expected in later life. Only another complete procreative cycle and then strictly adhering to the rules for post partum care prescriptions can restore the health that was lost in this way. The following beliefs are related to the following: during childbirth all the bones become loose and the joints open up, and rest and warmth are required to restore them to their normal condition. And so the rural nursery is hot and sticky and no window or door is opened for several days to prevent the exposure to wind. The mother is covered with thick blankets even in the middle of summer. She is often inconvenienced by this and sweats profusely, but she either keeps to the practice because she truly believes it to be for her own good or she upsets her mother-in-law and husband by prematurely meeting the wind. The appropriate time for rest after birth was considered to be seven days, one month or even three months by different respondents. In fact, however, no woman stayed longer than one week and one was found in the field again after three days. All women ate seaweed soup and rice after birth, as do all Korean women, often to the exclusion of anything else. The wisdom in this is said to be that it promotes regeneration of blood and milk flow, and that it is like ginseng for the baby. Also it is said to be the

only food a mother can tolerate after birth, because everything else, even beencurd, would be too hard for her to chew, so that the teeth would eventually fall out, as they have become loose as the bones did. A mother-in-law had a severe argument with one of the clients for having secretly eaten other things, because of the high bills for the dentist that she now had to expect. It should be noted that seaweed is recommended by traditional Korean doctors for the treatment of anemia, bleeding and that it contains a considerable amount of vitamin K.

In practically every case the placenta was disposed of in a ritualistic manner. The courtyard was cleaned for the purpose, rice husks were used, and the burning took 24 hr. The ashes, in most cases, were scattered on the road in a long black line for long life of the baby. In some cases it was buried, and then always at a carefully selected place and deep enough so that no dog would dig it out again. On occasion it was wrapped carefully, tied to a stone and thrown into the sea, so that it would safely submerge. After local hospital delivery, the placenta was handed to the family upon request for appropriate disposal. One family did not do so and had regrets afterwards. The placenta is often called "sam" which is reminiscent of Samshin. But "sam" means also three. The placenta is often discarded at the third day after birth, and since Samshin is often referred to as a trinity of spirits, and since the number 3 keeps recurring in customs related to birth, all this does not seem to be a coincidence. None of the respondents was able to give an explanation for the ritualistic treatment except for saying that it always had been done that way. It is worthwhile mentioning, therefore, that traditionally the placenta received great reverence in Korea. This is still apparent in the placenta graves of elaborate beauty of some kings, and in old porcelain or earthen jars which used to contain buried placentas, which have been found from as early as the 10th century and are still in use.

CONCLUSION

This ethnographic study has shown that childbearing in Korea is integrated into culturally determined behavioral patterns between pregnant women and their families. If just the physical and not the socio-psychological and cultural aspects of health care are considered, better maternity care in the cosmopolitan sense of danger will become more destructive than beneficial. One source of conflict is that cosmopolitan medicine aims at the individual and knows only how to deal effectively with individual women, who have learned to submit to a dependency attitude and patient role towards the health services. The Korean woman, however, cannot assume such an attitude, even if she tried. The family rules over procreation for the sake of its continuation which comes before all other obligations of its presently living members, and is a mutually shared responsibility. The traditional rural Korean woman has been socialized to accept this as a fact and leans toward the family for comfort and support. The family in turn is strengthened and renewed in structure and function by adhering to this responsibility.

Another source of conflict is caused by the confrontation of traditional wisdom concerning childbearing and the attitude of cosmopolitan medicine to belittle it. Tradition has communicated concepts and behavioral patterns of very sound health value. In the area of childbearing in Korea they include the great confidence and self-assuredness of women to accept childbearing as their right and duty without desire to become "patients", to assume a sick role and to delegate responsibility to health services. They include the great care and protection that the family bestows upon the young woman. They include the non-'supine' position during actual birth and the mobility during labor. Modern obstetrics is becoming increasingly aware of the fact that at birth the supine position is more painful and more protracting for labor [7]. Women in this study were able to verbalize their objection to the medical practices in this regard amazingly well. They include finally the protection of the mother-child unit after birth by the family, the positive concern with lactation, with the recovery of the mother and the reconsolidation of the family after a period of concern and anxiety around the new member and its mother. However, women remain deprived of the protection that the modern services can offer, and it is imperative to offer alternative culturally-adapted service models.

The presented problem is of great significance because of the geographical, medical and cultural area it is dealing with. Cosmopolitan medicine needs to differentiate among responses to its approaches in different cultural settings, and to acknowledge the existence of sound culture-specific health attitudes when enforcing changes towards modernisation. Otherwise, there is danger it will do more harm than good.

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DETERMINANTS OF HOSPITAL UTILIZATION AND SURGERY ON THE NAVAJO INDIAN RESERVATION: 1972-1978

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Abstract—Hospital data from the Navajo Reservation indicate that utilization has been responsive to changes in the health care system, Navajo social organization, and disease patterns. Distance of a community from the nearest hospital is the best predictor of hospitalization rates in the community but involvement in the wage economy and household size also enter significantly into the regression. Age of patients is also significantly related to distance as well as to age of the population and to dependence upon welfare. The rate of cholecystectomies in a community is best explained by distance from the nearest hospital offering surgery. This is in contrast to rates of appendectomies and hysterectomies, which appear to be most significantly related to measures of acculturation to the dominant society.

In a previous article on determinants of hospitalization and surgery on the Navajo Reservation [1] it was shown that access to hospitals was more highly correlated with rates of use than were measures of need such as infant mortality and dependency and fertility ratios. It was concluded that differences in utilization which depend upon other factors such as educational level and involvement in the wage economy probably were important as well, but that access itself remained an overwhelmingly important determinant of utilization. That article was based upon one year's worth of data and did not include material on economic patterns from one part of the Reservation to another. The present article is based upon 8 year's worth of data, makes use of economic survey data from the entire Reservation, and uses smaller population aggregates as the unit of analysis. The results suggest that while access remains significant in explaining hospital utilization, population characteristics may be more or less significant as well depending upon the aspect of utilization that is being examined.

Many studies have examined a wide variety of factors which determine health care utilization as well as a number of different measures of utilization itself, e.g. preventive and acute care ambulatory visits, hospitalizations, rates of different types of surgery, and so on. Generally it is observed that patient characteristics (disease patterns, social class, educational level, insurance coverage) and characteristics of the health care system (number of physicians and hospital beds, specialty mix, reimbursement mechanisms) interact in complex ways depending upon the type of service being measured [2-7]. For example, surgical procedures may vary in their incidence depending upon the characteristics of the procedures themselves, the type of hospital to which a patient is admitted, the availability of surgical manpower, mechanisms of payment, and characteristics of surgeons [8-14].

It is often not clear, however, why particular surgical procedures or other measures of utilization vary as they do. Why, for instance, are cholecystectomies 5-7 times more frequent in Canada than in England and Wales for men and women respectively while colectomies are 1.8 and 1.7 times higher and lobectomies-pneumonectomies 1.0 and 1.7 times higher [8]? It has been suggested by Kisch *et al.* [11] in regard to surgery that what they call intrinsic and extrinsic factors occur in different mixes in different procedures. Intrinsic factors are those pertaining to patients: signs and symptoms, ability to pay, educational attainment, and so on. Extrinsic factors pertain to care providers and to the broader health care system. They suggest that for some procedures, such as craniotomies, intrinsic factors will weigh most heavily whereas for others, such as appendectomies and cholecystectomies, the mix of intrinsic and extrinsic factors will be more evenly balanced.

Using hospital utilization and socio-economic survey data from the Navajo Indian Reservation, it is possible to make some inferences about the relative importance of population and health service characteristics for a number of different kinds of hospitalization-related events. In a recent review of the relationship of socio-economic status to the use of physician services, Bice *et al.* [15] remarked that they had found little support for social psychological or cultural explanations. They go on to say: "This is not to suggest, however, that only economic factors produced variations in use in the past or that changes in the financing of services alone brought about the changes we have described. It is possible that the American public, especially the poor, has become more health conscious and more apt to view medical care as a desirable if not necessary service and that financing programs have facilitated the translation of rising demand into increased use."

This suggests that beliefs in the desirability of health care have become increasingly homogenous in American society and that at present it is primarily economic barriers that account for differences in util-

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ization behavior. In the present paper we are concerned with examining several aspects of health care utilization in a distinct population in United States, the Navajo Indians. Economic barriers to care have been substantially reduced for Navajos and many other Indians by the provision of free services by the Indian Health Service of the U.S. Public Health Service. Nonetheless, we observe differences in the use of services, some of which, we shall argue, can be best explained by proximity to care and some by differential patterns of involvement in the educational and wage work systems of the larger society. That is to say, if homogenization is occurring and if Navajo utilization patterns are becoming more nearly like those of the larger society, the change is not proceeding in a uniform fashion and is determined not so much by the availability of care as by much larger economic, social, and cultural changes differentially affecting various segments of the Navajo population.

BACKGROUND AND SETTING

The Navajo Reservation covers about 25,000 square miles in Arizona, New Mexico and Utah. The population resident on the Reservation was estimated to be about 147,000 in 1979. Per capita income is approximately 25% of the national figure. Unemployment and underemployment characterize between 50 and 60% of the labor force. The number of miles of all-weather paved roads per square mile, though increasing, is less than half that of the rest of the Southwest. The Reservation has been called by the U.S. Civil Rights Commission [16] an American Colony, and many of the characteristics of a less developed nation are to be observed there. This includes a high but declining birth rate (variously estimated at between 25 and 30 per 1000 at present) and a low crude mortality rate. The result has been a rapidly increasing rate of population growth over the past century which appears to have begun to decline during the present decade or so [17-19].

Crude mortality rates dropped rapidly from the 1930s to the 1950s. The rate was already about 8-10 per 1000 in 1955 when the U.S. Public Health Service assumed the responsibility of providing free health care to many American Indian tribes, including the Navajo. Since then the rate has dropped to about 6 per 1000. More striking is the shift in causes of mortality from infectious diseases and malnutrition to accidents. We have estimated that between 1955 and 1974 the accidental death rate increased by about 60% [20].

Since 1955 there have been changes in hospital utilization which undoubtedly reflect a combination of factors such as changes in disease patterns, health manpower, roads, availability of motor vehicles and so on. Between 1955 and 1962, the number of hospitalizations in Navajo Area hospitals doubled from 6000 to 12,000. This was much more rapid than the increase in the population and can only be explained by more readily available services. The increase in admissions has not been linear, however. Between 1962 and 1975 the number of admissions increased by only 50%, from 12,000 to about 18,000. It has been essentially constant since 1975 [21].

Over this period, average length of stay has continued to decline, from about 15 days in 1955 to 10-11 days in 1967, 8 days in 1972, and 5-6 days in 1978. With hospital admissions reaching a plateau and with average length of stay declining, hospital occupancy rates have been declining as well. In 1955 and 1956 occupancy rates in Navajo Area Indian hospitals averaged 72.5 and 69.9% respectively. By 1957 occupancy had increased to 77.8% and by 1966 to 83.6%. In 1973-1974 the rates had dropped to an average of 69% with a range of 57-81. In 1976-1977 the average was 60%, with a range of 48-72. This decline has been accompanied by the closing of many hospital beds in PHS Reservation hospitals: from 566 in 1969 to 471 in 1978 [22].

Finally, as Table 1 indicates, since the P.H.S. has assumed responsibility for Indian health programs, the age pattern of patients discharged from Navajo Area I.H.S. hospitals has gradually begun to change. As already noted, during the 1960s the number of patients increased considerably each year but their age composition changed only slightly. The proportion below the age of 10 declined by about 3% and the proportion 65 and above increased by about 1%. As the number of patients admitted each year began to stabilize in the late 1960s and early 1970s, the proportion of those aged 10 and below began to decline fairly rapidly, by about 7% from 1968 to 1977. The proportion 65 and above continued to increase at a slow rate from 7.2% in 1968 to 8.1% in 1977.

There is some indication, therefore, that throughout the late 1950s and most of the 1960s hospital utilization was increasing rapidly in all age groups, presumably as new field clinics and a major new referral hospital were built, as more personnel were recruited as a result of the doctor draft, and as the Great Society programs infused more money for health and social service programs into the Reservation. By the late 1960s, it appears that some major improvements had occurred in the health of the pediatric age group

Table 1. Discharges, Navajo Area IHS hospitals, selected years and age groups (excluding newborns)

Age	1959		1968		1974		1977	
	N	%	N	%	N	%	N	%
<10	3156	32.5	4854	29.1	4572	25.5	4087	22.0
>65	595	6.1	1195	7.2	1350	7.4	1501	8.1
Total discharges	9708		16,688		17,906		18,616	

since the number of admissions was beginning to decline despite the fact that the population was still growing as a result of a high, though slowly declining, birth rate and declining infant mortality rates. Not surprisingly, the number of admissions of elderly people continued to increase, but at a slow rate. We do not have adequate census data to determine age specific hospital discharge rates, but the rate of increase in the number of admissions of people 65 and above is probably not very much different from the rate of increase of the population in that age group.

At the same time as disease patterns and health care have been changing, it appears that Navajo social organization has also been undergoing change. Easily quantifiable and readily agreed upon indicators are difficult to find, but it does appear that there is considerable movement within the Reservation and to off-Reservation communities for wage work and improved educational opportunities. And a number of observers have shown that in those Navajo families where stable wage work has been found, kin ties are somewhat weakened when compared to families dependent upon multiple fluctuating sources of income, including various forms of welfare [23, 24]. In the latter situation extended families continue to be an important adaptive form of organization for the distribution of income and the provision of mutual aid.

One pattern characteristic of the changing social organization appears to be that of many young people moving from rural hinterlands of the Reservation, leaving behind a residual population which includes a disproportionately large number of the elderly. It is not likely that the age pyramid of the total Navajo population has changed much over the past 10 years since declining infant mortality rates would tend to balance the decline in fertility rates [25]. There is evidence, however, that migration has shifted the geographic distribution of young and old in the way described above, with the young being found disproportionately in Reservation wage work communities and off-Reservation in border towns or distant cities.

METHODS

We have made use of three sources of data: first, hospital discharge records of all Navajo patients seen in Indian Service and contract hospitals in the Navajo, Phoenix and Albuquerque Areas of the Indian Health Service from fiscal year 1972-1978; second, population estimates of Navajos resident in different land management districts of the Reservation in 1975; and third, economic data gathered from a random sample of residents of each land management district in 1974. We shall describe each briefly in turn.

The hospital discharge data are taken from discharge sheets for each patient cared for in an I.H.S. or contract hospital and include tribe, sex, age, community of residence, primary, secondary and tertiary diagnoses and several other items of information. These records and their limitation have been described in detail elsewhere [1]. The most significant bias is introduced by the fact that an unknown number of Navajo patients seen in non-I.H.S. hospitals have various forms of insurance coverage and hence may

not appear in the I.H.S. record-keeping system. Recent surveys in several parts of the Reservation [26, 27] as well as an unpublished review of records in one off-Reservation hospital suggest that this loss to the system is not large and is found primarily among off-Reservation residents with work-related injuries paid for by workmen's compensation. Thus, this data base includes as complete a record of the total hospital experience of a population as one is likely to find in the United States. Because it includes more than simply Navajo Area I.H.S. hospitals, the number of Navajo patients is higher than is reported from Navajo Area I.H.S. hospitals alone.

The population estimates for July 1, 1975 were prepared by the Office of Program Development of the Navajo Tribe as a result of the recognition that: (1) the tribal roll maintained by the Bureau of Indian Affairs over-estimated the size of the population by not taking adequately into account deaths and migration; and (2) the U.S. Census under-enumerated the population. The method of estimating the population is reported in detail by Davis and Kunitz [1].

The economic data were gathered in a 1974 survey sponsored by the Navajo Tribe and carried out by the Survey Research Center at Brigham Young University [28]. The sample in each land management district was small, and it is not clear how adequate the sampling frame was. Thus, there is an unknown amount of error in the data. Nonetheless, until an improved census is completed in 1980 these are the only data available which cover the entire Reservation resident population.

When presenting rates of hospitalization, we use average annual rates for 1972-1976 for two reasons: first, to use 1974 as an approximate mid-point; and second, because in July, 1977 the Winslow I.H.S. hospital was closed, thus changing the access to care of people in the land management districts served by that facility.

We should point out that the Indian Health Service has divided the Reservation into eight catchment areas called Service Units. Land management districts, of which there are 18, are smaller than service units. They were created in the 1930s as part of the Bureau of Indian Affairs stock reduction program, and they are the units at which much economic and social data have been collected. A map of the districts with an analysis of some early economic data has been published previously and the interested reader is referred there for more information [29].

It must be pointed out that we have no data on kin networks. The economic survey did not measure cooperation patterns among kin and evidently focused only upon households. A number of intensive studies of several Reservation communities have been published which indicate that involvement in full-time wage work tends to weaken reciprocal economic ties between related families [24, 30]. We draw the reader's attention to this observation because we offer some explanations of our results based upon it. The data we are using do not include measures of the sharing of resources among kin, however.

The regression employed is the stepwise procedure with maximum R^2 improvement (MAXR). This technique is considered superior to simple stepwise procedure because it does not settle on a single model.

Table 2. Correlation matrix of socio-economic and utilization variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Near hospital	0.67																			
2 Near surgery	-0.24	-0.09																		
3 Wage work	-0.42	-0.43	0.73	-0.49																
4 Welfare	0.52	0.46	-0.54																	
5 Education of men	0.01	-0.21	0.67	-0.32	0.81															
6 Education of women	0.07	0.37	-0.26	0.72	-0.28	-0.40														
7 Hogans	-0.44	-0.57	0.63	-0.63	0.70	0.64	-0.47													
8 Bathrooms	0.03	-0.16	-0.48	0.24	-0.34	-0.07	0.04	0.12												
9 Household size	-0.35	-0.36	0.68	-0.65	0.65	0.57	-0.48	0.62	-0.22											
10 Working women	-0.24	-0.18	0.73	-0.37	0.73	0.63	-0.16	0.41	-0.45	0.45										
11 Working men	0.34	-0.08	0.40	-0.17	0.22	0.52	-0.53	0.29	-0.06	0.31	0.40									
12 Vehicles	-0.45	-0.51	0.66	-0.60	0.67	0.60	-0.38	0.79	-0.07	0.83	0.48	0.27								
13 Median income	-0.25	-0.20	0.68	-0.46	0.61	0.40	-0.15	0.29	-0.68	0.48	0.51	0.30	0.47							
14 Per capita income	-0.23	-0.03	-0.47	-0.15	-0.36	-0.66	-0.02	-0.46	-0.30	-0.37	-0.32	-0.56	-0.43	-0.04						
15 Age of women	0.28	0.15	-0.77	0.31	-0.60	-0.55	0.01	-0.67	0.06	-0.51	-0.68	-0.35	-0.63	-0.45	0.60					
16 Age of men	0.13	0.47	0.13	-0.14	-0.21	-0.15	-0.18	-0.22	-0.36	-0.04	-0.26	-0.15	-0.26	-0.002	0.29	0.32				
17 Age of patients	-0.41	-0.48	0.62	-0.55	0.57	0.46	-0.23	0.75	-0.09	0.45	0.46	0.39	0.62	0.59	-0.37	-0.62	-0.28			
18 Hysterectomies	-0.31	-0.40	0.32	-0.14	0.44	0.33	0.16	0.51	0.13	0.07	0.27	0.01	0.42	0.35	-0.31	-0.49	-0.56	-0.62		
19 Appendectomies	-0.23	-0.70	0.15	-0.43	0.35	0.34	-0.46	0.68	0.22	0.19	0.12	0.31	0.40	0.14	-0.17	-0.17	-0.35	0.70	0.49	
20 Cholecystectomies	-0.49	-0.24	0.02	-0.26	0.02	-0.25	-0.09	0.16	-0.19	-0.04	-0.34	-0.33	0.01	0.22	0.43	0.16	0.45	0.17	0.10	0.18

N = 18

0.46, $P = 0.05$.0.56, $P = 0.01$.

Table 3. Mean values of the variables used in the regression analyses

Variables	Symbol	Mean
<i>Dependent</i>		
No. hospitalized/1000	RH	166.51
No. appendectomies/1000	RAPP	1.62
No. cholecystectomies/1000	RGAL	1.75
No. hysterectomies/1000	RHYS	0.75
<i>Independent</i>		
Miles to nearest hospital	NEARH	44.81
Miles to nearest hospital offering surgery	NEARS	66.03
Percent of income from wages	WAGE	61.53
Percent of income from welfare	WELF	18.26
Education of male	EDM	8.31
Education of female	EDF	8.38
Percent living in hogan	HOGAN	16.68
percent households w/bathroom	BATH	21.36
Household size	HSIZE	6.43
Percent working females	WORKF	10.52
Percent working males	WORKM	38.71
Percent owning a vehicle	VEHIC	60.73
Median income	MEDINC	3403.33
Per capita income	PERCAP	753.17
Age of female household head	AFHH	42.86
Age of male household head	AMHH	45.48

MAXR begins by finding the one variable model producing the highest R^2 . Then, another variable expected to yield the greatest increase in R^2 is added. Once the two variable model is obtained the variable in the model is compared to all those not in the model, and MAXR considers the improvement in R^2 that each potential change offers. The difference between the stepwise technique and the maximum R^2 improvement method is that MAXR evaluates all possibilities before a final choice is made.

The reader should note that we are in danger of committing the ecological fallacy by using the data as we have. We do not have information at the individual level which links hospital utilization to economic and social organization data. All we can say is that areas in which populations have high hospital discharge rates, for instance, are also characterized by small average household size.

RESULTS

In Table 2 we have displayed a correlation matrix of the variables utilized in the present study. Table 3 displays the mean values of the same variables. Broadly speaking, there are two patterns that emerge from the analysis of the economic variables. First, in communities where a high proportion of income is derived from wage work there is low dependence upon welfare, educational and employment levels of male and female heads of household tend to be high, a high proportion of homes have domestic conveniences of all sorts (we have presented only the figures for those with indoor bathrooms), average household size is low, median and per capita income are high and the average age of male and female household heads is low.

Second, areas with a high proportion of income

derived from welfare have poorly educated male household heads, a high proportion of families living in hogans (the traditional Navajo circular or hexagonal one room dwelling) without domestic conveniences, few women employed full time, and low median and *per capita* income. Significantly, there is no relationship to household size or age of male and female household heads.

These data are compatible with previous findings that involvement in full time wage work tends to weaken kinship bonds, although the alternative explanation is equally plausible that small household size may simply be the consequence of young household heads not yet having completed their families. In any event, the results are congruent with observations made in other studies on the Reservation regarding the differences between communities in which wage work is relatively available as opposed to those where it is not.

It is also important to point out that distance from the nearest hospital is unrelated to these economic variables with the exception of a positive correlation with proportion of income from welfare: that is, the further a land management district is from a hospital, the higher the proportion of income derived from welfare. Something approximately similar is true of distance from the nearest hospital providing surgery. Distance from surgery is inversely related to the proportion of homes with conveniences such as bathrooms and to median income, and positively (but weakly) related to proportion of income derived from welfare. Thus, while general hospitals are located in areas not necessarily characterized by high involvement in wage work, those which in addition provide surgery seem to be more likely to be found close to areas where incomes are higher and housing better.

Finally, a word should be said of the dependent variables in which we are interested: average annual hospitalization rates, rates of various types of major surgery, and age of patients. Hospitalization rate is inversely correlated with distance from the nearest hospital: the greater the distance, the lower the rate. There is also a tendency for rate to be correlated with age: the higher the hospitalization rate in a district, the greater the mean age of hospitalized patients. Mean age of patients is somewhat more highly correlated with miles to a hospital providing surgery. That is, older patients tend to come from districts more remote from hospitals.

There are positive correlations between rates of all three types of surgery. Hysterectomies and cholecystectomies are inversely correlated with distance from a hospital offering surgery; appendectomies are essentially uncorrelated with distance. There is no relationship to hospitalization rates. Most striking is the strong relationship of the hysterectomy rate to the cluster of variables related to wage work and what seem to be measures of acculturation.

The results of several multiple regressions are summarized in Table 4. In the analysis with average annual hospital discharge rate as the dependent variable, we find that the best single variable model includes distance to the nearest hospital, with an R^2 of 0.24; the best two-variable model includes both distance and the proportion of men working 50-52 weeks in the preceding year, with an R^2 of 0.46; and

Table 4. Coefficients of determination, R^2 , for each consecutive model: four regression analyses

Analysis	Variable symbol	R^2	Regression coefficient	Standard deviation
Hospitalization	NEARH	0.2363	-1.307†	0.325
	WORKH	0.4648	-1.694*	0.599
	HSIZE	0.6592	-0.201†	0.050
Hysterectomy	BATH	0.5560	0.000†	0.000
	PERCAP	0.7045	0.000*	0.000
Appendectomy	BATH	0.2585	0.005*	0.002
	HOGAN	0.4624	0.005*	0.001
Cholecystectomy	NEARS	0.4938	-0.007*	0.003
	BATH	0.6131	0.002*	0.001

* $P < 0.05$.† $P < 0.001$.

the best three-variable model added household size and produced an R^2 of 0.66.

Of special note is the fact that average educational level of male heads of households was highly correlated ($r = 0.73$) with proportion of men working 50–52 weeks. The high correlation means that it is difficult to distinguish between their effects. Neither distance and employment nor distance and education is strongly correlated, suggesting that the effects of distance and employment/education are indeed distinguishable. In the two variable model, full-time employment is inversely related to hospitalization: the higher the proportion of men working full-time, the lower the hospital discharge rate. Because employment is so highly correlated with education as well as with *per capita* income and the availability of such domestic conveniences as electricity, running water, and bathrooms, it is probable that the health of the families of wage workers is better than the health of other people. The result is that, once distance has been controlled, hospital discharge rates of populations with a high proportion of wage workers are lower than those of populations with low proportions of wage workers.

Finally, we have observed that household size contributes about 20% to the explained variance of hospitalization rates. That is, controlling for distance and employment, the larger the average size of households in a district, the lower the average annual hospital discharge rate. It is reasonable to suggest that in smaller families there is less likelihood that there will be someone available to care for an ill member. Hence, dependence upon hospitals may increase to take the place of help previously provided by kin. Small families may need to use hospitals for sick members who, in larger families, might be cared for at home.

We have remarked previously that there is a tendency for young people to leave Reservation hinterland communities and move off Reservation entirely or to Reservation communities in which wage work is available, leaving behind an older residual population. This is reflected in the mean and median ages of patients giving either on or off Reservation addresses. The mean age of Reservation resident patients ranges

between 26 and 27.6, depending upon the year, compared to a range of 24–25 for patients residing off Reservation. Median ages of the two groups are closer, never differing by more than a year and ranging between 22 and 24. This would seem to indicate that among patients giving Reservation addresses there is a small number of quite elderly people who contribute to an increase in the average age but are not numerous enough to significantly inflate median age above that of patients from off Reservation.

Turning our attention now to patients from Reservation communities, we are interested in examining the relationship between age and socioeconomic characteristics (see Table 5). The best single-variable regression model with mean age of patients as the dependent variable includes distance from surgery as the independent variable, explaining 22% of the variance. The greater the distance, the older the patients.

The best two-variable model adds proportion of income from welfare and explains 38% of the variance. Controlling for distance, the lower the proportion of income derived from welfare, the older the patients. A three-variable model which adds average age of male household head explains 52% of the variance.

Two other three-variable models are more effective, each explaining 62% of the variance. The first includes distance from surgery, substitutes wage work for welfare (the higher the proportion of income from wage work, the older the patients) and adds average age of male household heads.

The second model is the same as the first but substitutes average educational level of male household heads for distance from surgery. The greater the educational level, the lower the age of patients.

Clearly, age bears no easily understood relationship to the variables we have measured. It appears that mean age of patients is increased as distance from surgery increases. And, controlling for distance, welfare is inversely and wage work positively related to age of patients. This may be interpreted to mean that families with heavy dependence upon wage work are unable to care for elderly members when they fall ill. Conversely, when families have a high proportion of support from welfare, extended kin networks may be

Table 5. Coefficients of determination, R^2 , for each consecutive model

Dependent variable	Variable symbol	R^2	Regression coefficient	Standard deviation
Mean age of patients	NEARS	0.2164	0.027*	0.011
	WELF	0.3778	-0.013*	0.005
	AMHH	0.5222	1.137*	0.296
WAGE →	WELF	0.6214	0.024†	0.005
EDM →	NEARS	0.6232	-0.134*	0.054

* $P < 0.05$.† $P < 0.001$.

especially significant as a means of sharing income and providing aid, and this may be reflected in the ability to care for ill elderly family members at home. As we noted above, a number of field studies on various Indian reservations have shown that among families with steady sources of wage work, dependence upon kin is less than among families without steady employment.

Lastly, when distance and source of income are controlled, the age of the population as measured by mean age of male household heads is positively related to mean age of patients. A regression examining the relationship between proportion of older (65 and over) patients among all patients from each district and socio-economic characteristics shows mean age of male household heads to be the best single predictor, explaining 20% of the variance. The best two-variable model adds proportion of income from wage work, the two variables together explaining 39% of the variance.

From over-all hospitalization rates we turn to rates of several relatively common types of major surgery. We have already remarked that hysterectomies are correlated with various measures of involvement in wage work. The best single-variable regression (which explains 56% of the variance) is the proportion of homes with domestic conveniences, for which we have used bathrooms as the indicator. The best two-variable model adds per capita income and explains 70% of the variance. Distance from surgery does not add significantly to the variance explained.

A somewhat similar situation is observed with appendectomies. Again proportion of families with indoor bathrooms is the best single independent variable, explaining 26% of the variance, substantially less than in the case of hysterectomies. The best two-variable model adds proportion of families living in hogans and explains 46% of the variance. Controlling proportion of homes with bathrooms, the proportion of families living in hogans is significantly related to the rate of appendectomies. These two independent variables are negatively correlated ($r = -0.47$). This pattern is difficult to explain. What is noteworthy, however, is that again distance from surgery does not contribute to the variance explained.

Cholecystectomies are the third procedure we examined. Gallbladder disease has been found to be unusually frequent among American Indians, including Navajos [31-37], and there is therefore some reason to expect that access to care and measures of involvement in the modern wage economy might prove to be less clearly related to the incidence of

gallbladder surgery. In fact, however, the best single variable regression model includes distance from surgery, which explains 49% of the variance. The shorter the distance, the higher the rate.

One of the two best two-variable models adds proportion of households with a bathroom and explains 61% of the variance. The other equally good model substitutes average age of male household heads for distance from surgery.

DISCUSSION

Recent discussions of hospitalization and surgery have emphasized the controlling role of physicians and hospitals in determining utilization. The data presented here suggest that accessibility is indeed significant but that other factors are sometimes more important. In regard to hospitalization rates, it is clear that access is important but that the ability of families to care for members may also be significant. As families become smaller, presumably as they enter the wage economy or children leave home, they may be forced to rely increasingly upon formal social institutions to provide care that under other circumstances might have been provided by kin.

We see something similar when we examine the age of patients. Those areas that seem to be relatively more isolated and have relatively high dependence upon wage work tend to produce an older patient population. The effect is of course compounded when the population itself is older. But the point is that families in this situation appear to be especially likely to depend upon hospitals to care for their elderly members because they may be least able to care for them at home when they fall ill. Again it appears that involvement in the wage economy may sufficiently weaken kin ties that formal social institutions must be increasingly relied upon.

When we turn to various types of major surgery, we observe that there appears to be a relationship between access to care, characteristics of the problem being treated, and characteristics of people with the problem. If, for example, we place these procedures along a spectrum from most to least urgent, the ranking would be appendectomies, cholecystectomies and hysterectomies. The ranking is the same in terms of necessity. Technically, however, they are all of about the same complexity [12].

Appendectomies are done most commonly when the patient presents with an acute abdomen. As the ranking suggests, it is the procedure regarded as most urgent and most necessary. Presumably this percep-

tion is largely shared by non-physicians. This may be reflected by our regression analysis, which indicates that distance is unrelated to the incidence of the procedure. Nonetheless, a proxy measure of "modernization" (the proportion of households with modern bathrooms) is the best single explanatory variable, suggesting that even with this presumably urgent procedure perceptions of the need for medical care may vary significantly depending upon the nature of the population.

Cholecystectomies are not often done in life-threatening situations and may be the result of chronic abdominal distress. Hence, convenient access to a hospital providing surgery and getting into the hands of a surgeon may be most significant in predicting whether an operation will be performed.

Hysterectomies are commonly done to repair the damage and discomfort resulting from many births [38]. The willingness to accept such discomfort—even the definition of whether such symptoms represent discomfort—may be a measure of the degree to which a woman has changed her attitudes towards child-bearing and may be a reflection of acculturation to the dominant society, as the correlation coefficients and regression analysis suggest. This is supported by the fact that tubal ligations and induced abortions follow essentially the same pattern as hysterectomies [39].

Thus we may suggest that appendectomies are significantly related to the characteristics of the disease, cholecystectomies to access to care, and hysterectomies to psycho-social characteristics of patients. This is of course complicated by the fact that we are discussing a system relatively unique in the United States, one in which physicians are salaried and hence do not have fiscal incentives to do major procedures. Furthermore, unlike pre-paid practices, there is no fiscal incentive not to do procedures.

Not only is the health care system unique, but the population we have been discussing may also be somewhat unique in the United States. In contrast to the larger society, where attitudes towards the necessity for health care may be increasingly shared by all ethnic groups and social classes [15,40], within Navajo society there may still be wide variations in patterns of social organization and perceptions of the necessity for different forms of treatment as people become involved in the wage work economy and in the educational system at different rates.

The importance of social organization appears to be reflected in the variables which best predict overall hospitalization rates and age of patients. Attitudes towards medical care seem to be reflected in the variables which best predict the use of different forms of surgery. Thus, while it is necessary to have hospitals in order for patients to be hospitalized, and while it is necessary to have surgeons and gynecologists in order for surgery to be performed, these are not in themselves sufficient. The degree to which services are used clearly depends upon other factors as well, though just how important any given one is will depend upon the procedure in question.

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BOOK REVIEWS

Medicine Out of Control: the Anatomy of a Malignant Technology, by RICHARD TAYLOR. Sun Books, Melbourne, Australia, 1979. 278 pp. \$A 7.95

The author of a book dealing with the inadequacies and irrelevancies of much of modern medicine might well regard himself as fortunate to learn that his reviewer is undertaking the assignment while travelling extensively in certain South East Asian and Western Pacific countries. Not only can the text be dissected in greater detail than is usually the case with this particular reviewer but, much more importantly, the inappropriateness of so much contemporary medical technology is nowhere more apparent, to the point of being obscene, than when its successes are weighed against the continuing patterns of mortality, morbidity and sheer misery which are still so appallingly obvious in many of the poorer countries along the Western Pacific littoral.

This is not, however, a book about the health problems of developing countries, although the promotion and indeed exploitation of Western medicine in the third world is mentioned from time to time (with particular reference to the sorry saga of chloramphenicol). It is primarily an indictment of the philosophical confusion, methodological sloppiness and rampant profit-seeking (witting or unwitting) which characterizes so much of today's medical practice in developed countries—but a perceptive traveller in foreign parts cannot fail to note that, in a variety of guises, powerful forces are already at work to introduce many of the same inadequacies and irrelevancies into the third world, wherein it cannot even be pretended that such forms of medicine make any sort of economic sense.

There is another jolt, of a rather different kind, when the reviewer eventually reaches Japan and finds that the continuing saga of SMON (sub-acute myelo-optico neuropathy), reviewed in some detail in this volume, still arouses much discussion in the press and at medical meetings, with the Japanese government allocating (during the reviewer's visit) more than \$US 1 million annually in nursing expenses for SMON victims, involving payments of up to \$400 per month per person. Although hardly an instance of "medicine out of control" in the usual sense, Dr Taylor sees this as yet another example of grossly inadequate quality control in the practice of medicine, leading to massive human suffering and disability, grotesquely out of proportion to the vague intestinal symptoms for which Enterovioform (the causal agent) had been so promiscuously prescribed.

For conscientious readers of Illich, the case against modern medicine as detailed by Taylor will come as no particular surprise. This present book however is, at least for the physician reader, a much more impressive indictment than the Illich volume—less metaphysical, more closely reasoned, and above all impeccably documented by copious references to the medical literature of the last two decades. It is worthy of note that this documentation, almost without exception, is from highly prestigious international medical journals, some of which indeed have a substantial reputation for conservatism; Taylor does not rest his case on the flights of fancy that one can unearth in "Radical Therapist" or the ideological rigidities of a doctrinaire Marxist stance. He could indeed be said to have performed a valuable service if he had done nothing other than provide the extremely comprehensive list of references which occupies the last 16 pages of his book.

But he has done much more than this. In a series of tightly written chapters, and in lucid, compelling prose, he has expressed and justified his agony about many of the directions on which medicine is now embarked. Let us examine some of his main targets:

(i) He returns repeatedly to what he calls "the supposedly scientific" status of medicine. Of course to many this will be fearfully offensive, particularly those with a heavy commitment to scholarship, yet Taylor is able to make out a very strong case in this dimension. He quotes approvingly a statement from a distinguished Welsh obstetrician: "...features of similarity between scientific research and present day medical practice are largely incidental..." [1]. He is particularly vehement about the virtual absence of randomized control trials prior to the introduction of treatments of great potency; he pays particular attention to coronary artery surgery, some of the rapidly advancing popularity of which he attributes to the declining prevalence of rheumatic heart disease and thus an excess supply of cardiac surgeons. This lack of scientific appraisal of therapeutic results has created, in his view, some quite exaggerated claims for the effectiveness of modern medicine, and he is particularly incensed (and I'm sure that he is not alone in this) by the contemporary climate of opinion which suggests that the onus of proof—when some new technological marvel is introduced into investigation or treatment—must always be placed on the doubter. Those who have wanted to look critically at cost/benefit issues involved in the introduction of computerized tomography will know all too well what he means!—even a suggestion that one should pause to evaluate, prior to committing the vast sums required, is greeted by comments that suggest, subtly or not so subtly, that the questioner has rooted himself firmly in the dark ages of medicine.

(ii) Taylor is much preoccupied with "gadgetry", which he believes has now come to determine, rather than serve, medical care. He is particularly savage about the use of such gadgetry in screening programmes, here in particular drawing his evidence from absolutely impeccable sources. Because of this preoccupation with advanced technology, though for other reasons as well, we are currently immersed in an absolute orgy of investigation; he documents and emphasizes in this connection the exponential increase in the rate of growth in demands for clinical chemistry, haematology, and indeed all forms of laboratory and radiological investigation. He marshals an impressive range of witnesses to support this view that this preoccupation with investigation has failed to correlate with an improved outcome for those who are so generously investigated; indeed, as I have pointed out elsewhere [2], much of this investigation is clearly carried out for no other reason than to provide the doctor with intellectual satisfaction, an end not necessarily to be despised in itself, but which should certainly not be confused with improved patient care. It is unarguable, as Taylor points out, that this pattern of over-investigation is at its height in academic institutions wherein, as he says, "the ambitious medical resident... soon learns the politics of investigation. He will quickly come to realize that although he may be lambasted for ordering too few tests, he will very rarely, if ever, be taken to task for ordering too many (p. 80)". He attributes at least some of the blame for this to present day medical education, which he sees as much too heavily oriented towards technology and laboratory procedures. Our universities and teaching institutions are now in his

view dominated by super-specialists, biological doctors *par excellence*, whose psychological views are shallow and whose social views are non-existent.

(iii) Like most critics of contemporary medical practice, he goes into some detail about what he judges to be unnecessary surgery. Here again he goes back to some excellent original sources, and discusses some of the key papers in detail; he points out, for example, that not only were there between five and seven times more cholecystectomies in Canada than in the United Kingdom during 1968, but that this excessive surgery was associated with twice the death rate. Like Opit and others in Australia, he finds it hard to escape the conclusion that there is a causal connection between the number of surgeons available in the community and the frequency with which surgical procedures are undertaken. He deals in detail with the rates for hysterectomy, tonsillectomy and appendectomy and gives welcome prominence to the Saskatchewan experience, wherein the hysterectomy rate dropped dramatically following the appointment of a multidisciplinary committee to exercise some surveillance over the hysterectomy problem in that Province.

(iv) He is particularly scornful of some of the organizational patterns of modern medicine, in particular the progressive decline of the general physician who "is left only with the patients that nobody else wants.... even slightly complex problems are whipped out of their hands by the under-occupied sub-specialist...." These super-specialists "spend much of their time keeping up with the voluminous amount of irrelevant and frequently mediocre laboratory research which is carried on in their field". Much of the demand for such superspecialization is in his view clearly stimulated by the profession itself, through the excessive use of consultation with colleagues, and the self-perpetuating rituals of the superspecialists he sees as being causally linked with much of the iatrogenic disease about which many pontificate without however suggesting any solutions. There is a savage section on the consequences of the unwise use of surgical skills and contemporary technology directed towards the uncritical saving of lives, and he documents in detail the management during the past fifteen years of severe myelomeningocele, which he describes as "little short of an unmitigated disaster".

A good deal of the above material, it might be said, has a certain air of predictability these days, although it is nonetheless telling because it is articulating a gradually increasing ground-swell of dissatisfaction, expressed not only by certain "deviant" members of the profession itself but, with increasing force, by consumer groups and various types of auxiliary health worker. But Taylor also sweeps broadly through a number of other issues on which, unless one is a specialist in the particular field, objective information is hard to find or where, perhaps more accurately, there is a quite appalling lack of appropriately objective data.

Space permits nothing much more than a mere listing of some of these targets: (1) the dubious validity of claims for the importance of modern treatment in leading to increased survival periods for cancer patients—to what extent, he asks, is this a statistical artefact induced by earlier diagnosis? (2) aggressive treatment for various forms of malignancy, e.g. leukemia (sponsored by the "cancer research technocracies"), and in perinatal intensive care; (3) a preoccupation with laboratory research, particularly at the molecular level: "because it is easier in that variables are controlled with less difficulty...."; (4) the malevolent influence of autoanalyzers, which he sees as responsible for "an amazing amount of sloppy thinking"; (5) lateral chest films; (6) the emphasis placed on immunization, obscuring the need to focus on more fundamental issues such as sanitation and housing; (7) the extensive investigation of middle-aged hypertensives; (8) coronary care and intensive care units; (9) the emphasis on hospitalization for normal childbirth; (10) the value of *early* treatment; (11) peer

review ["a system which involves cardiac surgeons reviewing cardiac surgeons, or gynaecologists reviewing gynaecologists, is likely to result in cosy agreements which change little of substance"]; (12) renal transplant; (13) the excessive use of tranquilizers; (14) certain aspects of so-called 'health education' [he sees "... a determined plot by the medical establishment to turn us all into nervous wrecks"]; (15) the increasing use of technology in normal pregnancy ["coming at a time when... the birth-rate is falling dramatically.... such are the compensatory mechanisms of the medical-industrial complex"]; (16) doctors who conduct their own tests and endoscopic examinations; (17) research training for embryo specialists, "primarily designed to provide work horses for departmental heads" and, even worse, "dehumanizing".

It is a long list, and there would be few physicians who are not provoked, perhaps enraged, by at least some of these issues, and perhaps by many of them. Such rage might indeed be beneficial, to themselves and to the public, if it can lead them to justify more convincingly some of the claims which currently abound for many contemporary forms of investigation and treatment.

It is sad to have to say that, like a good deal of the work that he criticizes, Taylor himself turns out to be strong on problem identification, but relatively weak when it comes to the development of campaign strategies. His repeated emphasis on the extent to which what he calls the "perverse incentives" of fee-for-service systems of medical care have led us into disaster will be acceptable to many, though not all, of his readers. Yet it is clear that, even if a salaried service were to be adopted on a global basis overnight, many serious problems would remain. It also seems self-evident that the major redistribution of wealth that Taylor advocates, even if it were politically feasible in today's world, would not in itself resolve many of the problems which he sees as fundamental. Some of his statements, admirable in themselves, are not elaborated to the point where they could provide medical educators or health service administrators with anything resembling an action plan; many might agree that we should "put more emphasis on total population systems of prevention and on the social and economic changes necessary so that healthy living patterns are feasible and can become the cultural norm....", but what steps should we be taking to achieve this goal? Like many radical thinkers in the younger echelons of the health professions, Taylor believes that much would be achieved by a substantial "deprofessionalization" of doctors, yet such a case is not really argued, nor is any acknowledgement given to the possibility that many of the worst excesses of modern medicine flow from an *absence* of appropriate professionalization, rather than too much of it.

A more serious criticism, one which is of signal importance because it may well alienate many readers whom Taylor hopes to reach, is his almost complete failure to acknowledge the role of modern medicine in the relief of physical and psychological distress. This is a conceptual error within his own schema, because while saying on the one hand (quite correctly) that modern medicine pays far too little attention to the *quality* of life, rather than its sheer quantity, he only grudgingly acknowledges in one or two places the extent to which, when it uses its technology wisely, it has substantially improved the enjoyment of life for vast numbers of Western and third world people. Probably this scotoma is a counterpart to his almost wilful underemphasis on psychological aspects of health and disease: for example, his disproportionate focus on environmental and socioeconomic factors in the etiology of drug addiction, simplistic views which are currently fashionable but which fail to take into account the complexity of the many factors determining drug-taking behaviour. It is one-sided, to say the least, to attribute all man's problems to patterns of social organization, none to man himself.

Taylor is young, and sadly this fact will presumably be

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used patronizingly against him by some of those who will say that, with advancing years, he will surely develop a greater tolerance for his colleagues and the society in which we live. One can only hope that he does not with the passage of time lose the clarity and vigour without which he could not have written paragraphs such as: "In the Quinlan case the doctors allowed themselves to be battered from pillar to post by the judges and lawyers and the vast array of self-professed ethicists, while they continued on like drones, their actions being predetermined by the technology that had escaped from their control". Or, if that doesn't appeal, try this sample: "Screening has been born in an era in which the medical establishment is engaged in a vast over-selling campaign of its importance in the 'war against disease' in order to justify the ever increasing money that it plunders from the national coffers".

Organized medicine, alas, has few such talented polemicists within its ranks; we ignore them at our peril, although Taylor's book may perhaps be better avoided by those who, like John Hunter, feel that "my life is at the mercy of any scoundrel who chooses to put me in a passion."

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Nurse Practitioners: U.S.A., by HARRY SULTZ, O. MARIE HENRY and JUDITH SULLIVAN. Lexington Books, Lexington, MA, 1979. 242 pp. \$23.95.

Over the past 15 years, about 12,000 nurse practitioners have been trained in the United States. By definition, the term nurse practitioner (NP) refers to registered professional nurses who have received additional education in order to make clinical decisions formerly made only by physicians.

The national Longitudinal Study of Nurse Practitioners is the first major study that has thoroughly investigated the NP movement. Phase I provides baseline data on educational programs and the student cohort; Phase II examines NP role functions and the relationship between preparation and practice. Phase III consists of an update, because a number of new programs have appeared since 1974 and some of the original programs have closed. All three reports are available for a nominal fee from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, U.S.A.

This book is the result of a national invitational conference where an eminent group of NP authorities presented and discussed the Phase II study findings. Sultz and co-authors have managed to compile a coherent, readable book that will be valuable to students, educators, policy-makers, health care planners, researchers, and to anyone with an interest in this new nursing role which is complementary, not substitutive, to that of the physician.

The text is organized into three sections. Each chapter is followed by a discussion section where the material is critiqued and implications of the findings explored. The first section presents an overview of the study methodology and results with regard to NP employment and income, relationships between preparation and practice, independence within the NP role; and rural, school, and college health NPs. An overwhelming amount of data are summarized concisely. It is evident from the data that the NP

movement has accomplished its major goal of providing more widely available primary care for low income, high risk, rural and inner city groups.

The chapters in section two address subjects that are central to the realities of everyday primary care practice. These subjects, presented in a readable, yet scholarly format, include the effect of practice setting and organization on the NP role, barriers to practice, NP and physician team structure, basic styles of practice, and characteristics associated with a well-functioning health care team.

Section three presents critical issues confronting NPs in addition to a commentary and summary. The chapter on critical issues ignores many key issues such as reimbursement for services, legal constraints, and the importance of health care team structure. These issues are addressed elsewhere in the text, but a summary of all critical issues would have added to the overall strength of the book. However, the chapter does address health manpower projections and distribution as well as internal philosophical differences with respect to educational preparation and practice.

In summary, this book presents reliable data on NP education and practice. It also preserves the flavor of an exciting conference and cannot fail to be stimulating to educators, health planners, researchers, and practitioners. Indeed, the uniqueness of this book lies in the clear way in which the study highlights are presented and in the variety of opinions and comments expressed by the contributors.

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The Organization of Soviet Medical Care, by MICHAEL RYAN. Blackwell, Oxford, 1978. 168 pp. \$7.95

As the author correctly points out, "...a researcher cannot expect to obtain from published Soviet sources even fairly basic data relating to certain institutions, services and disease categories" in the U.S.S.R.

Unlike some Western proponents of socialism who regard Soviet medical care from a wishful thinking position and *a priori* belief that socialized medicine *must* be perfect, or close to it, Michael Ryan discusses this complicated topic without political bias. He doesn't attempt to apply the facts to the outdated writings of Marx and Lenin, or to the rhetorical statements of Soviet propaganda. In addition to Soviet official sources, which Ryan has analyzed very carefully, he has utilized other information that has reached the West, including reports and the testimony of former Soviet physicians and such political emigres as Solzhenitsyn and Bukovsky. Furthermore he has visited the U.S.S.R. on several occasions and interviewed Soviet doctors and patients acquiring information which is not available in a library. As a result, he presents a serious and objective work containing much valuable material and many facts and significantly contributes to the literature on Soviet health services.

Generally speaking, Russian social history is not well known abroad. A corrupt anti-democratic despotism is the routine image of tsarist Russia that most Western laymen and even many Sovietologists have. In fact, however, at the turn of the 20th century, Russia had made significant social, economic and cultural progress. In particular, as Ryan notes (Soviet assertions that) "...the Socialist State is the only State which undertakes to protect and continuously improve the health of the whole population" are actually inaccurate. The author emphasizes that "public agencies of various kinds played a major role in the delivery of medical care before the Revolution of October 1917". A special chapter is devoted to the structure of Soviet health services. The Western reader can here gain better understanding of the double system of management

of Soviet services. The author reminds the reader that the hierarchy of governmental agencies is matched by a hierarchy of Party committees which have a paramount influence on the functioning of all Soviet institutions.

Although Soviet expenditures on health services have increased considerably over the past years, the percentage of these expenditures in relation to the national income has not changed. They are comprised of the same proportion of the national income.

Soviet government has always emphasized that medical care in the U.S.S.R. is available to the whole population and free of charge. However, health services are not equally distributed among various strata of society and numerous health service charges are in effect throughout the U.S.S.R., for example, the payments for medicines consumed by outpatients, some dental and ophthalmic services, residence at a sanatorium and health resort. A promise of the 1961 Communist Party Program that the supply of medicines and treatments at sanatoriums would be free by 1980 has not been fulfilled. Yet, as Ryan indicates, no public debate on this topic has been allowed. There is a shortage of medicines and medical supplies and hospitals are overcrowded. According to Soviet statistics, the Soviet doctor-to-population ratio is substantially greater than it is in Western countries. Yet Soviet physicians' salaries are extremely low. There is unofficial private practice in that country, a fact which is concealed by the Soviet medical authorities who condemn capitalist society where "medicine is business". As the author notes, there is a system of Soviet self-financing outpatient clinics where service is not free of charge officially. Besides, many Soviet doctors who are employees of the state facilities accept payments from patients illegally. The tipping of nurses and orderlies is a widespread practice, claims Ryan. He is right. As one foreign physician told Hedrick Smith, "Most (Soviet) families bring food to their relatives in hospitals and they give money or gifts to...nurses aides, so that bed linens will be changed regularly and things will be kept cleaner" (H. Smith, *The Russians*, p. 74 Quadrangle, 1976).

Michael Ryan also discusses such essential problems as specialization in medicine, the role of paramedical personnel, functioning out and inpatient services.

The most crucial question is, of course, how effective are Soviet health services for the delivery of medical care. Ryan's book gives us a well-grounded answer: Soviet health service has shown a substantial improvement since 1950. "However, that record certainly does not entail a socialist commitment to the provision of optimum-quality care to each individual regardless of social and economic status". Basic features of the Soviet health service reflect a bureaucratic nature of "one of the most rigidly and unremittingly totalitarian of contemporary states".

The Organization of Soviet Medical Care is a very useful study. There is a need for a work of this kind.

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The Malpractitioners, by JOHN GUINThER. Anchor Press, Garden City, New York, 1978. 347 pp. \$10.00

There is a huge literature on medical malpractice, much of it generated in response to the medical malpractice insurance crisis of the mid-70's. Articles on the subject, largely appearing in periodicals directed at health care providers, cover a wide range of topics, including legal theory and evolving medical malpractice law; defensive medicine; standards of health care; insurance; health care provider and attorney attitudes; legislation; and alternatives to litigation. There are also a number of books, generally written by attorneys, dealing with medical malpractice as a whole fairly comprehensively.

While malpractice has for long been a serious concern of the medical profession, in recent years an increase in malpractice claims and the spiralling insurance costs have made the problem one of general public interest and extraordinary attention, including a federal commission, Congressional hearings, and a flurry of legislative activity in every state. From this increased concern a number of suggestions for solutions have been advanced, and several implemented, based, however, on very limited, faulty, and often conflicting empirical data.

The level of concern about malpractice is understandable, given the importance attached to health, the increasing use of medical services, and the risk involved in the use of new medical technology. The threat of medical injury is a real one, and negligence has not been adequately dealt with by the medical profession. Increased costs attributed to malpractice, in the form of higher fees due to defensive medicine and for higher insurance costs, are a serious matter.

Aside from these factors, the problem is an intrinsically fascinating one, highlighting, as it does, the strains in the provider-patient relationship and the complex interplay of forces at the law-medicine interface. Given these considerations it is quite remarkable that medical malpractice has received so little study by medical social scientists, all but a few references in the literature emanating not from social scientists, but largely from legal or health care providers or from insurance representatives.

This particular book, while not written by a social scientist, at least provides a fresh perspective. The author is a well-known investigative journalist, with considerable experience in legal issues. He did his job well, mastering the key concepts, synthesizing the bewilderingly complex and contradictory data, identifying the major legal, medical, ethical, economic, and social issues, and examining them critically and concisely. His research was obviously thorough and he demonstrates an enviable ability to discuss lucidly very complex issues, wading through the thicket of accumulated verbiage to highlight, in a readable manner, the crucial points of the problem.

Guinther does not pose as an "objective" social scientist. Rather, he assumes a critical stance, appropriate to an investigative journalist. Consequently, health care providers, attorneys, and insurance companies are the objects of stunning critiques, usually buttressed with good evidence. Often, however, he attributes motives to entire professions without making any effort to substantiate those claims. While a combative tone may make for spicy reading, at times his sarcasm mars the book, interfering with the substance without adding anything of merit (e.g., p. 266, "Nevertheless, the Kennedy-Inouye bill represents a real and enlightened concern for the plight of the medically injured, which may be the reason it was never passed into law."). Aside from such essentially minor lapses, the author, despite his partisanship, is even-handed in his criticism, considers all available data, even those not supporting his positions, and does make a generally convincing argument.

Guinther employs the case technique to enliven his material, culling over 50 case histories of injured patients from various published sources, both to dramatize in a human way the personal tragedy of medical malpractice, and to illustrate the various legal and medical issues discussed in the narrative. The technique is an effective one and Guinther uses it well, integrating the cases and abstract concepts in such a way as to make sense of the complex problem.

Using these cases as examples, Guinther systematically introduces and definitively discusses all the major medical and legal issues as well as the economic, social, and political ramifications. The perspectives of health care providers and other actors in this fascinating drama, such as plaintiff and defense attorneys, are thoroughly documented. Several chapters skillfully penetrate the shadowy world of malprac-

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tice insurance, arguing that practices of insurance companies extrinsic to the medical malpractice problem (such as investment losses) bore a major responsibility for the malpractice insurance crisis with all its consequences.

Gunther considers the arguments for and against various recommendations and proposes a number of his own. The book is a comprehensive and readable survey of a complex problem and would be an excellent introduction to the subject.

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Ethnicity and Aging: Theory, Research and Policy, Vol. 5. The Springer Series on Adulthood and Aging, edited by DONALD E. GELFAND and ALFRED J. KUTZIK. Springer, New York, 1979. 372 pp. \$17.95

This volume stems from a 1978 National Conference on Ethnicity and Aging held at the University of Maryland. Books which originate in conferences share common virtues and failings, particularly when they cover a "new" field such as the relationship between ethnicity and aging. They strive to cover a great deal: much literature, many problems and viewpoints. They also attempt to represent a variety of disciplines and, often, to make some sort of an assessment on the "state of the discipline", if indeed the discipline can be defined. Finally, these works strive to predict the future of the field. By its very nature, that prognosis has always been their most tenuous aim.

Ethnicity and Aging: Theory, Research, and Policy incorporates all of these elements; as such, it is a typical book. Its contributors range from psychiatrists to social workers to gerontologists. Its topics, nominally divided under the headings of "theory and policy perspectives", "ethnic families and the aged" and "research on ethnicity and aging", range from evaluation of stress among minority aged to analysis of AOA policy. Despite requested perspectives on the status of ethnicity and aging, it is never exactly clear whether the work is essentially a policy guide, a theoretical breakthrough, or a handbook for service workers. All of these are common problems for such a work. The book is neither common nor typical, however, in a major focus on white ethnics, including studies on aging in Jewish and Mormon families and a well-researched historical examination of traditional sources of mutual aid. The editors justifiably maintain that these groups have been ignored in the ethnicity and aging literature (although certainly not in the general work on ethnicity, in my opinion). It is gratifying to see more work on these groups. I recommend such articles as Markson's *Ethnicity as a Factor in the Institutionalization of the Ethnic Elderly* which examines mental hospitalization, and Mostwin's analysis of emotional needs among Eastern and Central European aged.

Unfortunately, the papers also present a dilemma which is evident not only here but in the field at large. The problem with this work on white ethnic groups is simply that it is never made clear what the fundamental dissimilarities are between their experiences and those of non-white

groups. The editors state that "despite the important differences in life chances, it is not clear that the situation and characteristics of the 'minority aged' are essentially dissimilar from 'white ethnic' aged". Perhaps. Yet, "life chances" can be interpreted in various ways and they certainly affect black and Hispanic "situations and characteristics". There are certain fundamental differences between black culture and white immigrant, second and third generation cultures. Many of these are attributable to racism which is hardly extinct in American life. These should not be ignored, nor even lightly passed over. This old question probably merits more study than all other facets of ethnicity and aging combined.

Ultimately, the old query emerges: what is an ethnic? It is here that Gelfand and Kutzik make their central points. Sometimes at the expense of their contributors, they espouse Milton Gordon's definition of an ethnic group as one set off from society by race, religion and national origin. They later expand on this to include Gordon's notion of an "ethclass", which posits the intimate intermingling, rather than separation, of class and ethnicity in American life, a fact which has historically led to a deleterious concern with "quaint" ethnic customs, rather than the political and economic questions which ethnicity presents. This is hardly debateable, even if the terminology is perhaps simplistic. More interesting to me was Gelfand and Kutzik's position on the current state of knowledge on ethnicity and aging, which is still heavily oriented toward immigrant culture. They see this orientation as narrow, not only because of what they see as an omission of blacks (although blacks might be said to have a sort of "immigrant culture" of their own) but also because it neglects the question of what a "new", non-immigrant ethnic culture might be.

The volume's contributors give a partial answer to this question through their various analyses of generational transmission of custom and value orientations, role orientations, etc. Yet, the information and analysis is an incomplete answer. The problem of the discipline is the problem of this book: research on the current aged is not the same as that on those who soon will be, ethnic or not. Many of Gelfand's and Kutzik's comments center on policy: more sensitive providers (who neither stereotype nor ignore ethnic differences) and services which provide both neighborhood and societal support. Unfortunately, one cannot break down policy, provider, and research barriers when one is not sure what will come next. Gelfand and Kutzik speak on the need, for example, for research on "middle-class Italians", but how many "pure Italians" are left? Indeed, how many of the next generation of aged can truly be said to fulfill Gordon's definition? The problems, and sometimes the solutions which Gelfand and Kutzik bring up, are certainly valid, as is the perennial need for further research; yet sometimes it seems as if we are presupposing a phenomenon which does not exist.

This is the problem of such a wide-ranging work and of trying to predict the future. *Ethnicity and Aging: Theory, Research, and Policy* is a work with flaws of diffusion and overambitiousness, but that is perhaps unavoidable. It will surely bring much comment and probably will stimulate the research it urges. For a fledgling work in an emerging field, one can ask for little more.

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EDITORIAL COMMENT

The two most critical pragmatic problems faced by all involved in the applied sciences are how to transform knowledge into action and how to remain cognisant of the continuous development in knowledge and thought. The former problem, as a content area of the disciplines involved, is kept under constant review in the field but the latter has for some time been threatening to grow out of hand.

In 1960 there were in the world 18,800 scientific journals, by 1970 this figure had increased to 40,431 and by 1980 it had reached 62,000. In the biomedical literature alone the total number of serials increased from 426 in 1900 to 4000 by 1950, 8000 by 1960, 14,500 in 1970 and now exceeds 20,000 [1, 2].

Writing as long ago as 1939, Bernal observed that it was easier to make a scientific discovery than to learn whether it has already been made and concluded that "unless something is done about it we shall soon reach the position where knowledge is being lost as rapidly as it is gained" [3]. We are now forty years on and still nothing is being done about it, indeed the situation continues to deteriorate.

Expansion of scientific activity is only one cause, albeit the single most important. Thus Bradford's Law, first adumbrated in 1946, helps explain the magnitude of the related factor of the extended inter-relatedness of science. "Articles of interest to a specialist most occur not only in the periodicals specializing in his subject, but also, from time to time, in other periodicals, which grow in number as the relation of their fields to that of the subject lessens, and the number of articles on his subject in each periodical diminishes" [4]. The situation has now been reached whereby in order to obtain 95% of the significant literature published in a given field it is necessary to scan between 500 and 1000 different journals [5]. To Bradford's Law of dispersion may be added Garfield's Law of concentration. This states that the tail of the literature of one discipline consists, in large part, of the cores of the literature of other disciplines. Thus "a good general science library (or index) that covers the core literature of all disciplines need not have many more journals than a good special library (or index) that covers all the literature of a single discipline" [6].

A consideration of the distinctive needs of the various interested parties will demonstrate the complexities as well as the conflicts. In an essentially multi-disciplinary enterprise such as our own, ten sources of 'need' can be distinguished. As will be seen, these are not mutually exclusive nor discrete categories but each has its own descriptive identity.

First (the order is unimportant), are the needs of the topic or substantive matter. These are subjects to both the Laws we have mentioned and require expression of the work and thinking being done for maximum dissemination. Furthermore, by their nature they may have to reach far beyond those already aware of the issues, and to fulfil this task a vehicle is required with an audience beyond that generally concerned with only a single discipline. The more innovative the approach and the more there is change abroad ('open-ness') in the scientific community the broader should be the readership. To this extent there is pressure against specialisation and hence an added burden on the reader who wishes to keep pace but who, to do so, has to explore further and further beyond the conventional journals of his discipline.

The second source of need is that of the discipline itself which requires core material to be made available with an emphasis on theory (to retain and expand its own identity), publicised on a narrow front (to keep it readily accessible and to maintain standards).

Third, harder to define, is the situation or context. For example, with limited resources, firm selectivity may be necessary in the developing world and emphasis on say preventive medicine or health education may have greater salience than many reports of clinical research. In its most extreme form there is the distinction between national and international dialogue. One corollary of this set of needs is the question of choice and who should be responsible for making it. Apart from the charge this places on librarians (as always), the manner in which the problem is tackled is sometimes curious. Last year, for example, the Rockefeller Foundation convened a Conference on *Selective Libraries for Medical Schools in Less-Developed Countries*, and of the sixteen participants, eleven came from North America but only one apiece from the continents of Africa and Asia [7]. This illustrates how difficult it can be even to discuss the various needs we describe with those directly involved, far less to meet them. In socio-medical fields the situational need in the case of the developing world carries its own in-built conflict or anomaly; on the one hand the need to be comprehensive, on the other hand the need to be intensive (i.e. to train clinicians, to educate doctors and the lay public).

Fourth, there are the authors, individual scholars who require the opportunity to have their work published for the good of science and their own recognition. This need of authors is not necessarily the same as that of the relevant subject because it goes beyond the latter, sometimes artificially and deleteriously stimulated in countries where advancement is largely determined by literary output. It is advantageous too, if manuscripts can be processed quickly, with detailed suggestion for improvement in the majority of cases where this seems desirable, even for rejected material. These needs for minimum delay and maximum feedback are often incompatible, an enigma well known to editors, and one only solved by close attention to reviewers' performance [8].

Fifth are the journals themselves whose primary need is to publish copy having the content, quality and quantity of a standard they set themselves to achieve. After several years of existence, a level of performance is reached from which it becomes increasingly difficult to depart. This level is determined by a wide variety of factors, many of them beyond editorial control. They include the activities of authors, partly determined by

further external factors such as fashion and other shifts of policy, developments in the field, and the quality and prestige of rival journals. They also inevitably reflect the balance of forces provided by the complex interplay of all those other needs we have outlined.

The sixth set of needs is that shared by publishers: economic viability as far above the threshold of tolerance (usually the break-even point) as possible. In a free market economy this means that the number of journals will continue to grow until the market saturates. But long before this point has been reached there will be gross inefficiency in scientific communication. With *laissez faire* conditions prevailing among publishers, there is a direct conflict of interest between them and the scientific community, and because in a free market new journals will continue to be published, this inherent conflict increases the responsibility of scholars and librarians to devise means of acquainting themselves more thoroughly with the respective merits of competing publications and to make sure that their conclusions are implemented.

The seventh source of needs is that of libraries and librarians, whose main concerns are to incorporate in their lists all those journals of merit commensurate with the requirements of their users and the sizes of their budget. The concomitant tasks faced by librarians in the teeth of the literary explosion are arduous. Sixty years ago a good University serial librarian could form a balanced judgement of the respective merits and relevance of competing journals on the basis of his own reading and discussions with faculty, but the specialisation of subjects, the proliferation of printed pages, the growth of University size and the multi-variation of library purpose combine to increase librarians' dependency on sound guidance from users, and this must be among his prime obligations. Warren & Bruer suggest that consideration be given to the design of selective libraries "in which criteria for selection are quality and potential use by clientele" [9]. But is this not what occurs in libraries all the time? The crucial question is the degree of (a) the possible and (b) the actual objectivity of selection and how the latter can approximate more closely to the former. Patterns of usage are better than no guide at all, but to the extent that users can only use what is already in the library their guidance must be arbitrary, telling more of their specific interests than of the comparative quality of the holding. The problem of selectivity is complex with at least two facets: the potential methods for quality selection by library users and sources of objective guidance available to librarians. These may be the same, as for example the method based upon frequency of citations advocated by Goffman [10], or they may be different, as will be the case in establishing a core collection when the emphasis will be on established journals.

There is an additional duty incumbent upon librarians: they not only need to obtain the largest possible budget but if they can provide publishers and editors with reasons for their selections this will enable the latter to make more accurate assessments of the generally perceived quality and cost rationale of their publications.

An eighth category of need is that of the learned societies. In many cases they have the obligation to publish not only the work of their members, but also the proceedings of their meetings, as well as announcements and general items of news. They are generally in the strong position of having a captive readership, subscriptions being incorporated in the membership fee. And because their membership is known and reasonably assured, the publication of journals linked to larger societies is viewed favourable by most journal publishers. This is a powerful factor increasing the size and number of journals and thereby compounding the problem of significant readership.

The ninth set of needs is those of conferences whose organisers deem it desirable to publish *Proceedings*. Indeed the promise to do so facilitates the search for travel money, thus increasing attendance. But by their nature, proceedings and conference notes are uneven in quality and unduly voluminous. Thus, as with the learned societies, conferences are yet another cause of expansion. There is a powerful case for re-examining the whole pattern of conventional conference procedures with their hastily prepared, often unoriginal material, presented in seemingly endless procession to a progressively more somnolent audience and subsequently released, with minimal editing, upon a saturated market.

Finally, and perhaps most important, there are the needs of journal readers who require to be informed of new findings, fresh thinking and important activities as concisely, clearly and cheaply as possible. Without entering into a discussion of the legitimate desirable functions of a journal, more numerous perhaps, particularly in the less exact sciences, than most editors allow, there should be as few journals as are warranted by the quantity of meritorious writing being consistently prepared. This is what in a rational world *should* determine the number of journals. But since the arbiter of the number of publications in a free economy is what the market will bear rather than what good scholarship requires, it is in their own best interest for readers to co-operate with libraries and with the editors of their choice. Readers include, of course, teachers and undergraduate students and for them there is a special need for a regular supply of journal issues sufficiently integrated about a theme to be suitable for specific courses and for the detailed consideration of specified topics.

This embarrassment of riches is a problem that is at its most virulent in the west. In other parts of the world it takes different forms. For example, in Latin America, excluding Brazil, only two libraries hold 600 subscriptions (i.e. 1% of the maximum possible), while only 13 hold not less than 300 subscriptions [11, 12].

In the whole of Africa, outside South Africa, there are only 46 medical schools and the provision of quality control is only beginning to be developed, notably in Nigeria where 5% of each University's budget is made available for library use [13]. Apart from the general shortage of funds in the developing world health, librarians frequently work in quite isolated conditions with "neither a ready forum for discussion nor the necessary moral support derived from concerted effort" [14].

There is one final problem of a more substantive nature peculiar to the biomedical literature. Conventional traditional scientific medicine placed greater emphasis on cure than on prevention, and on high technology

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medicine, and this is reflected in the holdings of medical libraries and most discussions about 'core' requirements. The dominant influence of clinicians is the most potent cause of this disparity but another cause is that journals concerned with primary care and social or preventive medicine tend to be younger and *ipso facto* less well established. Although serious enough in developed countries it can produce more glaring and serious imbalances in the developing world where resources are fewer and selectively commensurately more rigorous, and where medical priorities may be quite different.

An illustration of how deeply the momentum of orthodoxy operates is provided by the most intensive case study of the literature of a single disease yet undertaken. Analysing the literature on schistosomiasis, Warren & Newill prepared a computerized listing of the complete literature from 1852 to 1962 [15], and this was followed, in 1976, by the publication of a compendium of the best papers selected by an international board of 47 experts [16]. In the course of a yet more recent analysis, Warren & Goffman listed 23 subfields of the literature from 'hepatosplenic schistosomiasis' to 'military' (whatever that may mean) and including 'epidemiology', 'control' and 'immunology' [17], but no mention of prevention in terms of social intervention or health education nor, it seems, were publications that deal with such matters among the 10,286 journals analysed. Now, for a totally comprehensive review of the *clinical* aspect of one discrete disease the analysis was probably the most complete ever accomplished and the lessons to be learnt, in terms of quality control for librarians and the dynamics of scientific literature for scientists were important. Nevertheless, unless its limitations are recognised such valuable work can be grossly misleading for those seeking to establish holdings in core areas. The basic anomaly is that fragmentation of subject matter, in both the pure and applied sciences, is not only the prime cause of the literary explosion but is also the reason why great care is necessary when undertaking detailed analysis. What may seem comprehensive to the orthodox may appear conservative to the innovative.

We have dwelt a lot on needs but there is one that overwhelmingly affects all involved in the growth of scientific literature. This is the need for closer co-operation between the various parties especially librarian, reader, editor and publisher. Because, as we have tried to show, the interests of these four categories are not the same and in certain cases are in direct conflict, the assumption that all will be well in the end, or would be if we could just solve the financial shortage, is false. New and vigorous channels of communication must be established and more careful study of the structure, dynamics and uses of scientific literature undertaken, with all parties fairly represented. This has become a matter of world-wide urgency.

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PROFESSIONAL ASSOCIATIONS, ETHICS AND DISCIPLINE AMONG YORUBA TRADITIONAL HEALERS OF NIGERIA

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Abstract—Four Yoruba traditional healers were interviewed on their professional associations and the objectives of such association. A semi-structured questionnaire was administered to 165 traditional healers on the ethics of traditional medicine and the discipline of erring members. Photographs were made of sign-posts related to the practice of traditional medicine found in strategic locations in and around Ibadan city. The results of the study showed a proliferation of Yoruba herbalist associations. These associations serve as meeting points for healers for social purposes, and to share their professional experiences. There are rules and regulations (mostly unwritten) that guide the practice of traditional healers. Disciplinary bodies also exist to deal with offending members. The misleading nature of one herbalist's sign post is highlighted. The disadvantage of not having a central professional body to control its activities, and the dangers of unsubstantiated claim of proficiency in the treatment of certain diseases by herbalists is emphasized.

The invited comments on this paper have stressed the growing interest in traditional medicine and have touched on some of the problems confronting researchers and health planners in matters relating to traditional healers. The author is in agreement with many of these comments and has attempted giving answers to some of the questions raised by the discussants.

INTRODUCTION

In Nigeria and many developing countries, scientific medicine and traditional medicine co-exist and the two systems are well-patronized by health consumers. The practice of scientific medicine in Africa is along the lines found in Europe and America, although available facilities in terms of human and material resources for practice is less adequate in the developing countries. The practice of scientific medicine is controlled by accredited professional associations in all countries. Such associations keep a register of members of the profession, and claim to ensure that medical ethics are adhered to by all practitioners by the associations' punishment in cases of professional misconduct. For each country, there is usually a parent professional body, with regional or state branches. Activities of such professional associations are documented through notices/preceedings of meetings, and the publication of articles on medical science in various journals.

The traditional healers are often the only source from which 80–90% of the population of many developing countries can receive health care [1]. Their importance in health care delivery in Nigeria had been stressed [2–5]. In spite of this high utilization of traditional healers, there has been no account in the literature about the professional body/bodies controlling the practice of traditional medicine. At the preliminary stage of a recent study of Yoruba traditional healers in Nigeria [6], I found that the traditional healers also have professional associations. Indeed, the support of one of the main professional associations facilitated the study. The ethics which guide the practice of the Nigerian traditional healers have not been previously reported. Information on whether they have ways of protecting the interest of the public by way of punishment and/or other forms

of deterrent for infamous acts amongst their members should be of interest. The present communication is on professional associations, ethics and discipline among Yoruba traditional healers.

MATERIALS AND METHODS

The study was carried out in three parts. The first part was on professional associations. Four traditional healers were interviewed. Two of them could read and write the vernacular (Yoruba) and two were illiterate. The four healers were asked the names of Yoruba herbalist associations known to them, the year of formation of each association, and to indicate whether the associations were still functioning. The healers were requested to give a brief historical background of the associations, if this was known, and to outline their objectives. The two literate herbalists were allowed to refer to the scanty written records available from a few traditional healers.

The second part involved 165 traditional healers randomly selected from 31 towns and villages in the Yoruba speaking areas of Nigeria. A semi-structured questionnaire was administered to these healers. The scope of the questionnaire is reflected in Tables 2 and 3. The details of the selection of towns and villages for study, the selection of herbalists interviewed, the preparation, pretesting and administration of the questionnaire as well as the analysis of results were published in an earlier communication [7].

The third part of the research involved taking photographs of sign-posts related to the professional life of the traditional healers (Figs 1–5). The practitioner whose sign-post is shown in Fig. 2 was interviewed about how he diagnoses hypertension, a symptomless condition, and the drugs he uses for treating it. A sample of the drug for gonorrhoea advertised in



Fig. 1. Secretariat and training center sign-post of the Amalgamation of Nigeria Medical Herbalists on Oyo Road, Ibadan.



Fig. 2. A traditional healer's sign-post. He is a specialist in hypertension, stroke and cardiovascular diseases but he admitted that he does not know how to measure blood pressure!



Fig. 3. Advertisement sign on the wall of the house of a traditional healer. This sign-post is meant to advertise the availability of medicine for "gonorrhoea and hernia". Note the "Important notice" ("akiyesi pataki") on the left corner. Its title is "LABODE ELEMU GBAJUMO OGUN", that is, "LABODE ELEMU, the renowned medicine-man".

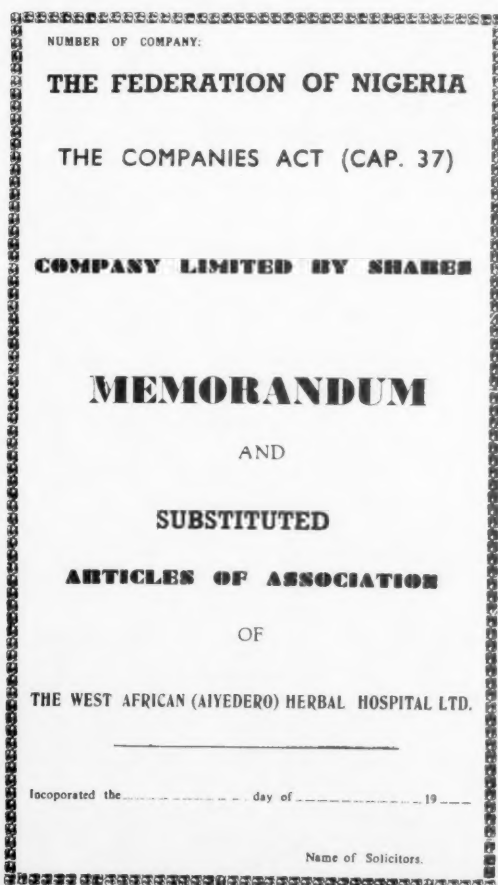


Fig. 4. An attempt at founding a herbal hospital. This is the cover of the hospital's constitution (the venture failed).

Fig. 3 was purchased and tested *in vitro* for effects on isolated cultures of *Neisseria gonorrhoea* organisms.

Of the 165 herbalists involved in the questionnaire aspect of the study, only 156 filled the questionnaire sufficiently well to be included in the analysis of results. The results of the study are shown below and in Tables 1, 2 and 3 and Figs 1-5.

RESULTS

Professional associations

Herbalist or traditional healers' associations have existed among Yoruba since the 19th century. In the early stages, such associations were confined to individual communities. The "Oloriawo" or "Babasegun", "the head of those who keep secrets" or "father of the healers", was the designation for the head of such associations. Since most of the people are illiterates, very scanty records of their activities are available. Towards the end of the 19th century the herbalists became aware of the need to form regional associations. Hence, about 1886 (Table 1) the Ekiti-parapo Herbalist Association and the Beje Medical Herbalists Association were formed in Ekiti and Ijebu-Igbo areas. Although these associations served primarily the interests of communities in their areas, herbalists from other towns and villages in the Yoruba speaking areas subscribed to them. Other associations were later formed. The objectives of these associations in those early days were:

- (a) To afford herbalists the opportunity of meeting and knowing themselves;
- (b) To provide a forum for members to cooperate in their practice by identifying specialists in specific problems and referring relevant difficult cases to such persons;



Fig. 5. A certificate issued to registered members of a herbalist association.

Table 1. Herbalist associations among the Yoruba

Name of association	Probable year of formation*	Comments
Akoko United Herbalist Association	1945	Functioning
Association of Nigeria Medical Herbalists	1908	Functioning
Beje Medical Herbalists Association, Ijebu	1886	Functioning
Egbe Aiyegunle Herbalist Association	1950	Defunct
Ekiti-parapo Herbalist Association	1886	Functioning
Ewedaiyepo Nigeria Herbalist Association	?	Functioning
Federation of Herbal Indigenous Practitioners	1945	Functioning
Gbegbesele Aiyelola Herbalist Association	1930	Functioning
General African Medical Herbal Organisation of Nigeria (GAMHON; also called Amalgamation of Nigeria Medical Herbalists)	1945	Functioning
Ijebu-Mure Herbalists Association	1888	Functioning
Ijunmun-parapo Herbalists Association	1930	Defunct
Lagos African School of Herbalist Association	1935	Defunct
Nig. Herbalist Research Association	1950	Defunct
Ogo-Oluwa Herbalist Association	1955	Functioning
Taiyese Herbalist Association	1950	Defunct
Union of Nig. Medical Herbalists	1930	Functioning
United Nig. Medical Herbalist	1950	Defunct
Western Herbalists College	1950	Defunct

* These dates were those given by my informants and were not authenticated since there were no written records in most cases.

Table 2. Professional ethics of the traditional healers/midwives

No.	Questions	Possible options	Number of respondents
(a)	Is public advertisement allowed	Yes	74
		No	78
		No response	4
(b)	Can a herbalist/traditional midwife actively canvass for patients?	Yes	29
		No	115
		No response	12
(c)	Can a herbalist/traditional midwife be intimate with a patient who is of the opposite sex?	Yes	—
		No	148
		No response	8
(d)	Is there any disciplinary body for cases of misconduct?	Yes	135
		No	15
		No response	6

(c) To provide a forum for the continuous improvement in the knowledge of the herbalists through exchange of ideas on herbal remedies.

(d) To preserve and ensure the growth of traditional medicine.

With the passage of time, the herbalists became politically conscious and a few of their associations were registered along the lines laid down by the government for trade unions. Among other functions, these associations became media for agitation for government recognition and support. Table 1 shows the more important regional herbalist associations among the Yoruba.

Apart from achieving the above aims, these associations were charged with the responsibility of drawing-up guidelines and codes of conduct to discipline

erring members. Many of these associations published pamphlets containing their constitution (Fig. 4). Abortive attempts were also made to establish herbal hospitals. It was also the duty of herbalist associations to assess the quality of the knowledge of herbalists who wished to become their member through interviews. Certificates of proficiency were issued by some associations to successful applicants. Figure 5 shows the certificate issued by one of the herbalist associations.

Professional ethics, capable acts and discipline

All 156 herbalists in the second part of the study belonged to one or more professional associations. The response pattern to the questionnaire are shown in Tables 2 and 3. Disciplinary actions against

Table 3. Offences for which herbalists can be disciplined

Type of offences	Number of respondents*
Being intimate with a female patient	79
Procuring abortion	34
Seducing or committing adultery with the wife of a professional colleague	30
Fraud	19
Preparing harmful medicines	17
A male herbalist using his penis as applicator to push a drug into a female patient's vagina ("atidiki")	15
Stealing	13
Failure to attend association's meetings	13
Receiving money from patients under false pretence	11
Seducing or marrying a patient	10
Social misconduct	9
Giving a useless medicine to patients	9
Practising without joining the professional association	8
Treating a married female patient who is not accompanied by her husband or relation	7
Aiding a thief by giving him medicinal charms	5
Snatching a colleague's patient	5
False advertisements by the healer about his competence	5
Leaking secrets	2
No idea	4
No response	8

* Several herbalists named two or more offences.

members could take the form of fines, suspension or dismissal from the association, or handing over to the police for prosecution if a criminal offense had been committed. The type of disciplinary action taken would depend on the gravity of the offense committed. The associations set up disciplinary bodies from among their members.

Figures 1-5 depict various features on matters related to advertisements, professional associations and the practice of traditional medicine. The healer whose sign-post is in Fig. 2, who claims to treat hypertension and cardiovascular diseases, does not know how to measure blood pressure! He claimed to treat "hypertension" with herbal concoctions whose components were not disclosed. The drug advertised for treating gonorrhoea in Fig. 3 showed no pharmacological activity in *in vitro* tests on cultures of *Neisseria gonorrhoea*.

DISCUSSION

There are several herbalist associations among Yoruba traditional healers. Efforts to make them form one professional body have so far been unsuccessful although some of the associations have combined to form G.A.M.H.O.M. (Table 1). However, the latter is not an all-embracing association of Yoruba traditional healers. This proliferation of professional associations makes a central control of the practice of traditional healers difficult and weakens their bargaining power with the government. Table 1 also shows that the herbalists have felt the need and have attempted to establish a herbal college and a herbal research unit. Figure 1 buttresses the latter and Fig. 4 the former.

The herbalists, like Western-trained doctors, have tried to protect the interest of the society they serve by having ethics that bound the practice of their profession (Table 3). From Table 2, it will be noted that apart from public advertisement on which opinion is divided, most of the herbalists agreed that it is unprofessional to canvas for patients, have intimate relationship with a patient and it is possible to discipline erring members. Some of the culpable acts in Table 3 are similar to what would constitute an infamous act if committed by the present-day practitioners of scientific medicine. It is difficult to imagine how the healer whose sign-post is in Fig. 2 could treat hypertension without a proper method of diagnosis of the disease. This casts serious doubts about his claim. His practice may be mere deceit of a gullible clientele. It is important to protect the public from this type of practitioner. Also, the much advertised gonorrhoea medicine (Fig. 3) had no effect on plates

of *Neisseria* organisms cultured *in vitro*. Although *in vivo* tests were not done, the effects of anti-biotics can usually be demonstrated *in vitro*. The absence of activity in *in vitro* tests puts the efficacy of this medicine in doubt. Again, the dangers of patients with gonorrhoea infection purchasing a worthless medicine for treating their condition cannot be over-emphasized.

In the course of the larger study [6], it was discovered that the professional associations wield tremendous influence over their members. Their co-operation and support will be needed if proposals to utilize traditional healers for health care delivery in the developing countries is to be successful. They are also indispensable in research ventures into traditional medical systems. It is important that further studies be carried out to identify the herbalist associations in the major ethnic groups in Nigeria and other African countries. The Western-trained doctors and government health policy makers should liaison with such associations to ensure success if and when the proposal of the W.H.O. [1,8] that traditional healers in Africa should be integrated or at least, should cooperate with scientific doctors in the delivery of health care is implemented.

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PROFESSIONAL ASSOCIATIONS, ETHICS AND DISCIPLINE AMONG YORUBA TRADITIONAL HEALERS OF NIGERIA

by D. D. O. OYEBOLA

DISCUSSION

by

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This study relates to traditional medicine amongst the Yorubas—a major ethnic group in Western Nigeria comprising some 14 million of the total population of 80 million in Nigeria. The first section of the report was published in *Soc. Sci. Med.* **14A**, 23–29.

Readers would be well advised to read the first article in order to gain better appreciation of this report. Although the study relates to a particular ethnic group—the Yorubas, there are many aspects common to tropical African Communities in general, and the statements that scientific or western and traditional systems of medicine co-exist effectively and that 80–90% of the populations depend almost exclusively on traditional healers especially for primary health care are statements of fact. There is no vacuum anywhere and each community over the years has developed its own health care system in rational response to the perceived causes of illness.

The often quoted statement that “some 80% of the people in the developing countries have no health care system at all” is therefore totally erroneous and misleading. These people depend on their traditional and indigenous health care systems and their healers, practitioners of traditional medicine and traditional birth attendants or so-called native midwives are indeed their primary health care workers.

The belief that illness arises from supernatural causes and indicates the displeasure of ancestral gods and evil spirits, or is the effect of black magic is still held by many communities in the Third World countries, and to some extent, this is also true of the industrialized countries. It is therefore wrong to attribute magical, irrational and superstitious ideas to any group of countries or levels of industrial or educational development. Naturalistic causes of illness are favoured in the industrialized countries, but the evidence is that the two approaches to health care are complementary and that with the swing of the pendulum greater attention should be paid to the traditional, indigenous or alternative systems which bring comfort to very large numbers of people everywhere.

Recently, some health administrators in the developing countries have recommended the inclusion of traditional healers in primary health care services on the grounds that traditional medicine is holistic and the healers know the socio-cultural background of their patients, and are highly respected and experienced in their work. Economic factors, distance, time, traditional beliefs and shortage of health professionals, particularly in rural areas, have also influenced the above recommendation. Training and orientation programmes have already been developed in several countries for suitable healers and traditional birth attendants especially. Provided they are willing, such traditional health workers can, at a very moderate expense, be trained to the level where they can provide adequate acceptable health care.

Certain governments are already encouraging the development of the type of professional associations described in this study, with the enactment of appropriate legislation for licensure and registration. The more enlightened laws aim at enabling the healers to assume some doctor-functions and with adequate legal protection in the performance of those tasks. They also provide assurance to patients that the persons undertaking the health care have been properly trained.

The type of professionalism regarding quality control, more ethical and rational development of traditional medical practice will no doubt assist in the achievement of better collaboration and possible integration of the various health care systems.

Present health care systems place most of the developing countries in a dilemma. Either we continue to aim at a type of medical care which cannot, in the foreseeable future, be extended to cover all needs; or we revise our ideas on types of medical care and delivery systems. Dr Oyebola's study report is therefore timely and there is little doubt that the time is now opportune for clearly defined policy decisions at the highest governmental level and the enactment of realistic legislation for the recognition, control and development of traditional and indigenous systems of

health care. Happily, these initial steps have already been taken by certain third world countries.

Finally, we must remind ourselves that much of modern medicine has stemmed from traditional medicine. Should the health professions acknowledge the healers and traditional birth attendants? Or is it wiser to leave things as they are? What is regarded as unorthodox today may well become highly Orthodox before the close of this decade.

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It is quite usual among non-specialists to think that traditional healers are individualistically-minded peoples, refusing any collaboration with colleagues, because this would mean sharing of personal "secret" knowledge. Through a short historical approach, Dr Oyebola has demonstrated, on the contrary, how deep are the roots of solidarity and communication between healers: the foundation of the profession on initiation and the public acknowledgement of their social status by a formal appellation have indeed always situated healers within a corporate body. Among ritualists and priest-healers, this solidarity has even taken in the remote past, in the form of formal associations with regular meetings, control over individual practice by elders in the initiation, and collective therapy in few occasions. I would suggest that Dr Oyebola makes a distinction between individual herbalists and healers working at a shrine or within a ritual, because these two categories of healers were not traditionally in the same position, regarding relations with initiators and colleagues. Their proximity to modern associations is therefore evidently different.

Colonial administration and bureaucracy in independent countries have more recently pushed healers to use new legal forms of solidarity expressed in numerous modern associations. These new administrative structures can surely be considered as a continuation of former solidarities, but Dr Oyebola has not stressed enough, according to me, the rupture with the tradition. Any comparative study of constitutions and statutes regulating these associations reveals a tremendous abuse of legal terms which mean very little to healers, and researchers must evidently read, behind explicit aims of the associations, what they really want. It is not enough to note that associations have assigned themselves as main objectives, census and registration of healers, enforcement of ethical code with fines for malpractice, defence of profession, etc.; in fact, these associations have multiplied in African cities, since the Independence mainly, for two more fundamental reasons that Dr Oyebola has not explicitly stated: first, healers try to define themselves and their therapeutic activities within modern society, in proposing a new space to occupy; second, formal associations intend to force governments to make decisions regarding legal status of traditional medicine and individual licences for practice. Healers have attained a new visibility in modern Africa, not only as

individuals but above all as corporate bodies, exerting pressure on Ministries of Health and health officials. I had sometimes the impression, in reading Dr Oyebola that healers are waiting for recognition by WHO and local governments without active participation in this debate: in fact, they took the initiative and they are still protagonists in the process.

I disagree with the position advocated by Dr Oyebola concerning his sociological description of the healers' professional associations. My close work with healers' associations in Zaire has convinced me that national associations cannot exist for the time being, and this, for the benefit of healers, because various territorial regions, different categories of healers are more easily represented through many parallel associations. This pluralism must be stimulated and only the coexistence of associations can really maintain democratic participation of individual healers. I am not against federation, concertation and cooperation between associations, but my feeling is that efforts must be preferably, at this stage, directed at developing strong local, regional, limited associations; the national healers' associations I am aware of, in many African countries, appear to me as purely legal empty forms without any power of mobilization. Sociological characteristics of efficient healers' associations can be reduced everywhere to the two following traits: first, they are rooted in a geographical area, or in a particular form of therapy (herbalists, ritual priest-healers, spiritualists, ...); second, they are highly personalized, in the sense that leadership is assumed by a healer of great fame in the area. Only associations with these two characteristics have shown their capacity for "bargaining power". As a second step, national-level associations will slowly evolve from the incentive given to the formation of local associations, but governments must be careful in their promotion of such an unrealistic national administrative structure. To guide this process towards a national association, I think it necessary to provide a permanent minimal structure: for example, regular meetings between local leaders associations.

The Health Ministry, in any African State, must rely very much on local healers' associations for any action taken within the realm of traditional medicine. These associations constitute, according to me, the only channel allowing continuous contacts with healers of any level and in any area of the country. Many responsibilities must be delegated to the board of local leaders associations: for example, only peer review can really lead to decision concerning "who is a healer", and new services of inspection created within few African Health Ministries, with the aim of delivering individual licences, would take advantage to document their certification on the technical advice given by local associations. In my opinion, the first stage towards recognition of traditional medicine goes with the necessity for anybody who considers himself as a healer to seek his membership within a local association. Health Ministries must entrust these associations and rely on decisions taken by healers colleagues, in many areas of concern: census, registration, evaluation leading to individual licences, codification of professional rules, etc. In our proposal to the Zairian government after a three-years research on healers, we constituted healers' associations as a

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center of gravity for the new health national policy regarding formal utilization of traditional healers in the official health delivery system (see Bibeau, Corin, Mulinda and Alii (1979). Abridged Report published (English version) by International Development Research Center, Box 8500, Ottawa K1G 3H9, Canada).

Dr Oyebola has discussed extensively the relations between associations and codes of ethics. Professional ethics have always existed among healers, and its writing down is conjectural, having become a necessity within the modern Africal context. Examination of written deontological codes enables me to say that the first concern for healers is to adapt former regulations to modernity without betraying them. Articles developed in these codes are dedicated to such problems as use of traditional solvents (oil, water, alcohol) for drug preparations, prices for consultations, disposal of devices which served during therapy, use of etiological categories for interpretation of disease (for example, sanction put on healers referring too often to witchcraft in their interpretation), minimal facilities to hospitalize patients, community-context for individual treatment, etc. Most healers still recognize that they are obliged to perform their therapeutic activities according to regulations, and these regulations are still, in their majority, very clear. What has dramatically changed is the contextual setting of the practice, and healer associations have the duty to guide their members in this difficult work of adapting former rules to modernity. Deontological codes represent substantial efforts made by healers in this direction. They are not existing, first of all, as a prevention against quacks, or a locus for disciplinary actions against erring members.

My last comment relates to the two sign-posts on hypertension and gonorrhoea treatments. I do not know why Dr Oyebola has limited his investigation to two negative cases, when researchers have stressed positive outcomes in many other disease situations. This limitation can be interpreted as a refusal of the science dimension within traditional medicine and I would like to know Dr Oyebola's exact position on this problem. I question the method followed to study treatments efficacy: it is not because a healer does not use apparatus to measure hypertension that he is unable to "cure" it. And what does "curing" hypertension mean?

The problems raised by Dr Oyebola regarding professionalization among traditional healers are important, but authors should approach these problems with tools developed by medical sociology, which would provide relevant interpretation. I understand that it is not always possible for biologists, physiologists and physicians to have a parallel formal training in sociology or anthropology, but when they study multidimensional problems, it would be very helpful for them to work within a team research.

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Dr Oyebola's report on the professional associations of traditional Yoruba healers in Nigeria comes at a time of growing recognition of the continuing impor-

tance of traditional medicine in its many forms throughout the world; of the complexity and diversity of these traditions, even within supposedly culturally homogeneous settings; and of the extent to which each of these traditions is regulated and sanctioned, officially and/or unofficially, within its own social context.

The demonstration—as in this paper and other recent contributions—that such institutions exist will not surprise many social scientists. Reports of this sort should help, however, to increase awareness, understanding, and acceptance of traditional healers by those of the cosmopolitan medical profession. In many countries cosmopolitan practitioners complete their training with little, if any, exposure to the alternative (i.e. non-cosmopolitan, non-"scientific", non-"Western") forms of medical care that may be available within their country or region. Even now few medical school curricula include required instruction in this area. Elective instruction in comparative medical systems does not meet the need. Optional courses generally attract students who are already aware of, interested in, and receptive to the possibilities for interaction between or among diverse "systems" of medical care. In my view an introduction to comparative medical systems (to include study of reports such as the present one) should be a part of the core curriculum of any school in the health sciences.

The only point in Dr Oyebola's paper that I would question is his statement (from his informants) that Yoruba associations have existed (only) since the 19th century. It may not be possible to prove it in this particular case, but I should guess that the origins of these Nigerian associations are ancient indeed. I suggest, in other words, that some form of healer's association, however local and small in scale, can be found in any society that supports traditional healers—that is to say in any society, past or present.

I should also like to expand the author's opening point about the co-existence and patronization of medical systems. It is not only in many developing countries that such conditions exist. The state of national development may influence the relative "importance" of various systems of care but some degree of medical pluralism is surely universal.

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In spite of the numerous studies on traditional healers, Dr Oyebola's lucidly written and thought-provoking article is probably the first attempt to address the central issue of professional associations in traditional medicine.

As the author rightly points out, the existence of traditional healers associations is not a new phenomenon. However, they were mainly organized at the community level and served useful social and professional purposes (e.g. referral and consultation). They had a network of communication channels (eaves-dropping, gossip, etc.) through which they

gathered information to help them in their practice. As noted by the author, attempts to organize them at the national level are recent. Such efforts have not always been successful for several reasons, notably internal strife for leadership positions and difficulties in legitimization and integration into the national health care system. Nevertheless, with the support of the government some progress has been made in some areas, a good example being the formation of the Institute for Herbal and Plant Medicine in Ghana.

The advantages of having accredited traditional healers associations are many. The author aptly points out "Their cooperation and support will be needed if proposal to utilize traditional healers for health care delivery in developing countries is to be successful. They are also indispensable in research ventures into traditional medical systems". These are plausible reasons, and they bring into a sharp focus some of the basic issues that should be tackled before any meaningful integration becomes possible. Some of these issues have been raised by Dr Oyebola, and I would like to comment on them.

The ease with which new professionals are accepted into the health care delivery system depends very much on the attitudes of physicians. They usually make the decision as to when and how to use the new professionals. Their decision is based on whether the services of the new professionals are perceived as role-elevating or role-threatening to them [1]. However, instead of coming to grips with this basic reality in the case of traditional healers, the reason often given for keeping them away is that they are untrainable because they hold superstitious beliefs, and because their practice is secret it is difficult to evaluate. Also, they are regarded as quacks because they claim to cure disease which they can't cure. Oyebola echoes these apprehensions when he states "The healer whose sign-post is in Fig. 2, who claims to treat hypertension and cardiovascular diseases, does not know how to measure blood pressure. He claimed to treat "hypertension" with herbal concoctions whose components were not disclosed. The drug advertised for treating gonorrhoea in Fig. 3 showed no pharmacological activity *in vitro* tests on cultures of *Neisseria gonorrhoea*".

I believe that not knowing how to measure blood pressure should not be taken as sufficient evidence to cast doubt on the efficacy of traditional medicine. The observation of Oyebola is based on only one person and is not statistically valid. On the other hand, if the traditional healer is the only one specializing in the treatment of hypertension and cardiovascular diseases in the area under investigation, then it might be worthwhile to subject hypertensive patients (diagnosed by scientific methods) to treatment by this herbalist under controlled conditions to enable us to make a better assessment.

Another important aspect that has been stated repeatedly is that traditional healers have a different method of diagnosis and treatment [2]. Thus the investigator should have posed questions to find out how native doctors diagnose hypertension and cardiovascular diseases which do not have to conform to western standards. Their claim to contact some supernatural beings and good ancestral spirits in their

treatment should not be dismissed as superstitious. I think that until an independent observer can confirm or disprove the reality of these paranormal phenomena, it will be difficult to make such statements as Dr Oyebola makes above. Obviously, Dr Oyebola and many others seem to be influenced by their mode of training in "scientific" approaches to diagnosis. Some doubts about traditional medicine, I believe, may be removed if physicians would "condescend" to undergo the type of training available to traditional healers (minimum of 3 years for fetish priests in Ghana). Then with the added advantage of their scientific analytical mind help to settle the issues. The case of acupuncture is relevant here.

This is not to argue that everything traditional healers do is beneficial. There are frauds everywhere. It is not inconceivable that some native healers may be phonies. Generally speaking, however, unlike itinerant drug hawkers they are genuine and well meaning people. They treat many patients who get well and are never seen by Western trained physicians [3]. I agree with Dr Oyebola that there is a need to separate quacks from genuine practitioners, and one way to do this is to organize them under accredited professional bodies.

The second point is that it is not uncommon, even in scientific medicine, to come across cases where a drug may have potent *in vivo* effect but without *in vitro* action. Diethylcarbamazine, trade name bano-cide, is a good example. Its efficacy as an antifilaricide is only realized *in vivo* [4]. It is possible that a metabolite of some compound(s) in the concoction is responsible for the therapeutic efficacy. It is, however, difficult to subject such a concoction, which may be crude, and, therefore, contain many substances, to careful scientific investigation. One can only go about this by trying to isolate an active principle(s) from the concoction and test for its effectiveness *in vitro* and *in vivo*.

Undoubtedly, Dr Oyebola has done an excellent job by bringing into focus a central but hitherto neglected issue for health professionals in developing countries who are being encouraged to work with traditional healers. Traditional healers are willing to talk on many aspects of their practice if the investigations are made in good faith and from a genuine desire to learn and help. I hope that Dr Oyebola's insightful discussion will stimulate further research in this important area.

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Dr Oyebola's discussion of professional associations for traditional healers points to some of the central issues in the current resurgence of interest in traditional medicine, and is most timely in view of the deliberations which are now taking place about the advisability, feasibility and consequences of a closer official relationship between traditional healers and the cosmopolitan medical system.

The recent call for "Health for all by the year 2000" has placed a renewed emphasis on primary health care, particularly in rural areas. Tied to this emphasis is a recognition that the goal cannot be reached if reliance is made on cosmopolitan medicine alone. Not even with concerted training and employment of Nurse Practitioners, Hospital Assistants, "Barefoot doctors" and other types of village health workers, in combination with physicians, would this goal appear realizable. The feeling is that traditional practitioners must be officially brought into the picture, especially since "indigenous health practitioners are there already" [1]. Dr Oyebola is not alone in stating that such healers are the main source of health care for more than 80% of rural populations in many countries. A resurgence of interest in, and promotion for an official reliance on, traditional medicine can now be noted throughout the world.

This interest has in part been legitimized by the WHO, which has made repeated recommendations for member nations to integrate traditional healers into the national health care systems, or at least establish a cooperative relationship with them, whenever possible. This was again reiterated within the 1978 "Declaration of Alma Ata" [2], the same year in which the WHO also published the report on "The promotion and development of traditional medicine" [3]. The WHO Traditional Medicine Group which has been functioning for several years and serves as a clearing house on issues related to traditional medicine is currently preparing a handbook on traditional medicine for health administrators which should be available in early 1981 and would presumably offer guidelines for collaboration.

Physicians in control of national health care systems and especially those within the hierarchy of national (cosmopolitan) medical associations, however, still seem to be quite skeptical about integration and even about collaboration. One can, of course, point to numerous cases, in "developed" and "developing" countries, where collaboration between cosmopolitan and traditional healers have taken place, but to establish a national policy for such collaboration seems to be quite another matter. The, by now, almost fashionable criticism of physicians which relates the reluctance to collaborate with a desire for medical monopoly, defense of status and maintenance of superior income possibilities should not blind us to the fact that some of the hesitancy in wanting to deal with traditional healers is often motivated by a direct concern for the welfare of patients. There are valid reasons for skepticism of certain traditional healing

practices. One should be careful, however, in too easily pointing to some of the detrimental results of traditional treatments as it is by no means certain that their damage equals (or surpasses) that of the estimated 20% of all illnesses which are due to (cosmopolitan medical) iatrogenic causes. Faults can be found on both sides. Surveillance, censure, guidance, training and examination should be required for all practitioners, and one mechanism for this could be professional associations.

The hesitancy to collaborate is often caused by neither self-serving nor by validly skeptical reasons but is rather a consequence of ignorance about traditional healers and about their capabilities. This is particularly the case in relation to so-called "folk" practitioners within local medical "systems" [4] and many of the "popular medicine" practitioners [5] who are quite individualistic, have little standardized training and go through no uniform final exam or centrally monitored period of intern-, or preceptor-ship. In most countries it is the folk healers, the herbalists, bone setters, spiritualists, spirit mediums (and the "popular" injection doctors) and others including the more uniformly definable midwives, who make up the majority, if not all, traditional healers.

Professional associations for herbalists and other folk healers could presumably overcome this lack of knowledge by generating information about the healers they represent. Through such associations it is presumed that an overview of the training and capabilities of healers, and the types of treatment modalities used, will be revealed more easily and will be better understood by physicians and others. Such associations are also expected to have a certain amount of control over the members by having established mechanisms for ascertaining professional competency and ethical conduct. Dr Oyebola points to the importance of this as well as to the problems new associations face in assuring such competency and ethical conduct (i.e. mention of the questionable claims made by members of an association about their ability to treat hypertension and gonorrhoea).

National and international research and study groups, which are working with traditional healers and their professional associations, where these exist, have been established in many countries and serve to overcome the information gap. The Division for the Documentation of Traditional Medicine at the National Museum in Kuala Lumpur and the Traditional Medicine Research Unit at the University of Dar es Salaam are but two of numerous examples. A further example is the International Association for the Study of Traditional Asian Medicine which was formed after a week-long conference in Canberra in September, 1979, where practitioners and students of different traditional Asian, and cosmopolitan, medicine met. Papers from such collaborative research groups and meetings are increasingly appearing in the medical and health care literature with whole issues of certain journals being devoted to the subject (e.g. *UNESCO Courier* July, 1979 [6]; *Hemisphere* July/Aug., 1979 [7]. *Social Science and Medicine*, of course, has long been in the forefront in providing such information.

The question of whether or not traditional healers should be licenced or registered before being officially

recognized is central to the issue being discussed. It has been argued, however, that one result of such licensing could be the creation of a subservient role for traditional healers and a (possibly drastic) change in their healing practices. This is one of the reasons why, as a first step, the WHO [8] and others have suggested professional associations of traditional practitioners should be established.

In a number of countries where traditional medicine associations are being formed, not all practitioners are eager to join; the majority of individualistic and proud folk healers are often skeptical of the benefit they will gain from such associations, a skepticism which does not necessarily arise out of incompetence or from a wish to be secretive. Healers are aware that initiators of such associations are sometimes motivated by special interest, political or self-serving considerations rather than by the potential benefit to the healers and their patients. However, if official recognition is to be predicated on membership in a professional association, and it is likely that this will be a minimum requirement imposed by many ministries of health, then membership in such associations can only increase.

It should also be pointed out that, contrary to what is generally believed, the folk healers with whom I have spoken in Southeast Asia express the desire for their practice to come under government scrutiny and to be "scientifically" evaluated since, as they are confident in their knowledge and capabilities, they feel such evaluation would provide official recognition and legitimation. It may be possible that such investigations could be carried out by the professional associations themselves through special committees which could function in collaboration with cosmopolitan practitioners and others. Many associations have already helped outside researchers carry out studies of their members and their therapies, as Dr. Oyebola indicates was his own experience, and has been mine as well. It may be worth promoting the establishment of a separate research committee for all such newly established associations; Dr. Oyebola sees the associations; as "indispensable in research ventures into traditional medical systems" and also points to the fact that the Yoruba herbalists have called for the establishment of a herbal research unit.

In Asia the situation is somewhat different from Africa, as mentioned by Dr. Oyebola, and might be more conducive to collaboration. This is due to the existence of regional, learned, medical systems, chief of which are the Ayurvedic, Unani and Chinese, with long established and standardized courses of training, examinations and professional associations governing both the capabilities as well as the conduct of their members. The contemporary interest in traditional medicine is in fact largely due to information about intersystem collaboration said to be taking place in China. Thus in many Asian countries there is substantial official recognition of, or at least a relatively respectful coexistence with, such traditional medical practices even if there is not always collaboration.

As elsewhere, in Asia there are also a multitude of other folk and popular healers, including traditional medicine sellers promoting a wide variety of wares; medical pluralism flourishes, patients go back and forth between cosmopolitan and traditional healers

seeking a solution to their problems [9,10]. So, naturally, questions arise: "With whom does one collaborate?" "Who are to be integrated?" "Who does one include in an official health care service policy?" and "What do these healers do, anyway?" These are questions asked by physicians who might recognize "some good" done by traditional healers, but who fear that any kind of official recognition would open a Pandora's box and would set a precedent for the eventual approval and promotion of every conceivable type of healer and healing therapy. This would hold true even if professional traditional medicine associations existed, and especially if one association represented all traditional healers in a country. Is Dr. Oyebola advocating the creation of such all-encompassing associations?

The situation in Malaysia may serve to add to Dr. Oyebola's discussion. The Malaysian Association of Traditional Malay Medicine was formed in 1977. It still has relatively few members, probably less than 200 as of 1979, but is designed to represent what is estimated to be more than 2000 full-time and 20,000 part-time folk healers, or *bomohs*, in the country [11]. It is most likely that as time goes on a substantial number of these *bomohs* will join the Association. The Association was established mainly through the initiation of the chief anti-drug addiction officer of the major political party, who is now the president of the association although he himself is not a healer [12,13]. He has long urged the government to recognize the Malay healers for their capabilities in treating and rehabilitating heroin addicts. The formation of the Association is no doubt seen as one mechanism along the road to such a recognition. This may be a valid interpretation, and the motivation is no doubt humanitarian, but the creation of an all-encompassing association could also complicate the official recognition of those healers treating addicts.

Recent research is beginning to indicate that certain *bomohs* may have certain, possibly substantial, capabilities in addiction treatment and rehabilitation [14,15] and ministry officials and physicians may be prone to give official recognition to some of the "drug *bomohs*". Despite this potentially positive inclination toward collaboration with the "drug *bomohs*", or at least toward some recognition of their capabilities, Malaysian physicians are still hesitant in recognizing these *bomohs*. The fear is that even if recognition is restricted to those treating addicts, all *bomohs*, who are a very mixed group indeed, could feel that they are being recognized. This fear is propelled by the existence of the new Association in which all *bomohs* are grouped together. It is still too early to tell whether this Association will soon be able to present an overview of its membership or have any specific gate-keeping mechanisms to ensure a desired level of therapeutic capability on the part of its different members. It is also too early to know whether separate or sub-groups of *bomohs*, herbalists, bone setters and the like, will be created.

A slightly older, and somewhat different association, exists in Malaysia, namely the Malaysian Association of Malay Medicine Sellers (PUBRA) which was formed in 1974 and claims to have about 400 members, some of whom are also *bomohs*. The association cannot yet present a particularly accurate

overview of its members nor of their wares. This is not because such information is felt to be unnecessary, but because a number of circumstances make it difficult for the association to obtain such information. The PUBRA leadership facilitated a recent study [16] which indicated that these vendors sell wares ranging from a variety of roots and herbs to patent medicines, with herbal "body strengthener" and "aphrodisiac" mixtures being particularly popular. The membership included people knowledgeable about traditional Chinese, as well as Malay, herbal medicines, those who had a number of quite complicated recipes at their fingertips and could easily recognize and name numerous medicinal plants, and those who sold ready-mixed preparations and did not have any particular "medical" or "healing" knowledge. Although the association is less than 7 years old, the membership list was found to be quite out of date, with at least 25% of those listed having moved, died or no longer selling medicine. All of these problems are understandable in view of lack of money for organizational purposes and because of the character of the membership itself which makes communication difficult, but they point out that the problems faced by such associations are not necessarily similar to those of new associations being formed for other "professional" groups.

In attempting to gain recognition for folk healers in Malaysia joint meetings, including an elaborate 2 day conference, have been held between the new "bomoh" association and the more established Malaysian Chinese Association and the Malaysian Homeo-Ayurveda-Siddha Physicians' Association. As mentioned, the members of these latter associations belong to regional medical systems and enjoy more of a positive relationship with cosmopolitan practitioners than do bomohs. By linking itself with these associations and by encouraging the formation of a Federation of Malaysian Associations of Traditional Medicine, it must be presumed that not only traditional medicine as such is to be promoted but that it is hoped that the members of the "bomoh" association, who are the least likely to be recognized, will gain recognition through such a linkage. The situation in Malaysia is, of course, quite complex, as it is in most countries, and it may well be that there are certain political considerations which motivate the more established associations to join ranks with the new "bomoh" association, so that both sides have something to gain. Certainly a federation representing all the traditional healers in Malaysia could have considerable influence.

There is no doubt a great deal of truth to Dr Oyebola's statement that the "proliferation of professional associations [in Nigeria] makes a central control of the practice of traditional healers difficult and weakens their bargaining power with the government". An association which could claim to represent all the traditional (Yoruba) healers in Nigeria, or the more than 20,000 bomohs in Malaysia, would wield considerable political power which could bring about favorable reactions to the association's members. But there are also other factors than mere size which influence the reaction to traditional healers. We must keep in mind that not all herbalists, let alone all traditional folk healers in a country, are the same and that, for a variety of reasons, certain types of healers

are more readily "acceptable" to ministries of health and cosmopolitan medical practitioners than others.

Traditional midwives/birth-attendants, who are often classified as belonging within the rubric of "traditional medicine", are a sub-group of "traditional practitioners" which has already gained wide acceptance throughout the world. Traditional midwives have been "integrated" into national health service schemes in many countries. If such midwives were members of an all encompassing central association of traditional medicine this would not necessarily mean that such an association could enforce a greater acceptance for them than they already have, nor that it could bring about greater acceptance for all its members because one sub-group of its membership had been integrated. In fact, as in the case of Malaysia, any suggestion that all members of an association should be officially recognized because a group of its members receive a favorable reaction could cause a restraint in the reaction to such a sub-group as well.

As Dr Oyebola indicates, it is most probable that the "cooperation and support [of professional associations] will be needed if proposals to utilize traditional healers for health care delivery in developing countries is to be successful". But it would seem that if a central association did exist it would serve its membership best, and use the political power it did have most appropriately, if it made a clear distinction between the different categories of folk healers, developed guidelines for ascertaining the competency of the members separately for each sub-group, although mechanisms for maintaining ethical conduct could be instituted universally, and made it quite clear that it was not assumed that all traditional healers were the same nor that the collaboration with certain traditional healers necessarily presumed the approval of others.

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Associations involving traditional healers are undoubtedly very common in Nigeria among the Yoruba. Out of a sample of 100 such healers studied in the city of Ibadan in the mid-sixties it was found that 89 belonged to some kind of club. 25 different associations were quoted by name, many of them being in the nature of local herbal guilds rather than professional organizations. The latter term implies responsibility for organizing a long process of systematic training and, whereas such healers do study for years, it does not take place under the aegis of the association.

The Ibadan healers we interviewed had begun to pick up their knowledge at about the age of 8 or 9. 20% of them came from families in which healing was an art or craft, handed down through many generations. The remainder had been trained by individual medical or priestly experts. Taken on whilst very young, they first worked under the guidance of an older man, carrying out a variety of menial tasks before being gradually entrusted with more important ones. The length of this medieval type of apprenticeship varied, averaging 8 or 9 years. But some healers had studied for over 15 years and 6 declared that they were still learning. The herbalists built up a knowledge of many different herbs and naturally occurring substances and their utilization in the manufacture of different kinds of medicines. There was never any suggestion of organized group training, however, the young boys were essentially assistants or acolytes.

Many of the herbalists in town advertised their activities by means of sign boards, in exactly the same way as sellers of bicycle parts or gramophone records might do. But some of the Babalawo (diviner priests) expressed a positive dislike of secular associations. One declared that if a healer's skills were sufficient they would soon become known without any necessity for public advertisements or special pressure to attract people to him.

What has not yet been definitely established is whether the associations of herbalists that do exist have sprung up simply in response to recent competition from scientific medicine or whether at least a proportion of them are manifestations of the tendency of the urban Yoruba to join clubs which represent to their occupational or social functions in the com-

munity. This is a feature of Yoruba society which has been remarked upon by Peter Lloyd.

I entirely agree with Dr Oyebola, however, that the proliferation of existing associations makes it exceedingly difficult to establish any kind of formal link between them and the representatives of scientific medicine. But this whole topic of syncretism is an enormously complicated one. It cannot be approached merely on the basis of two confronting groups of experts or specialists, scientific medical doctors on the one hand and the totality of Yoruba healers on the other. There are subdivisions and suspicions on both sides.

Nor should the activities of African healers be regarded simply in terms of their utilization of substances which may be pharmacologically active. Many observers have remarked on the relative insignificance of the pharmacological element, at least in so far as the operations of the Babalawo or diviner priests are concerned. This point was, for instance, expressly made by Michael Warren and his colleagues in a monograph on Yoruba medicines published by the institute of African Studies in Legon (1973).

I believe that much sifting and sorting has to be done and that a clear distinction needs to be drawn between the kinds of conditions which traditional practitioners are able to ameliorate and those in which their advice and operations may be positively disadvantageous to the patient. To take one example, the treatment of young children by local herbalists is almost invariably harmful. The presence of traditional healers should not be made an excuse by Governments who wish to avoid responsibilities in the field of maternal and child care or who will not expend adequate resources upon the public health side of medicine by preventing those communicable diseases which are known to cause the most childhood morbidity and mortality.

Secondly, it is a mistake to analyse the activities of the most revered healers purely in terms of a medical model. Although some practitioners are primarily herbalists, or bone setters, or circumcisors, there is a large group who deal with the social and psychological disturbances in the lives of their clients. It is better to regard these individuals as sources of spiritual or religious support than to look upon them as purveyors of esoteric physical treatments. Indeed there is an interesting example of a degree of syncretism already having been achieved between the therapeutic approaches of this type of priestly Yoruba healer and those of a different religion. The prophets of the separatist, Aladura Churches continue to wield the charisma of their pagan counterparts and offer help for psychiatrically disturbed patients whilst specifically rejecting the use of any drugs whatsoever. They use "the power of the Word" plus sanctified oil and water and Christian symbols.

However, there is so little published material about the activities of different kinds of African healers and the way in which they go about their work, organize treatments and relate to one another and to other types of counsellors and practitioners that a paper like Dr Oyebola's is immensely useful. Doctors and medical anthropologists throughout the continent should be encouraged to make detailed notes on the nature of traditional practice within their own locality.

It is only in this way that we can begin to build up a picture of the real diversity and worth of African medicine and escape from the over-simplification of misleading stereotypes.

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Le court article du Dr Oyebola lève un gros lièvre devant tous ceux qui s'interrogent sur les modalités de l'intégration des praticiens traditionnels dans les systèmes nationaux de soins des pays africains. Je soulignerai d'abord qu'il nous apporte des informations peu diffusées et donc précieuses sur l'ancieneté et sur le degré de professionnalisation à ma connaissance exceptionnels—en Afrique Occidentale des guérisseurs yoruba. Que les 156 "herboristes" de son échantillon (on aurait souhaité une définition plus précise de cette population) appartiennent tous à une ou à plusieurs associations professionnelles réunies autour des objectifs libéraux énumérés dans l'article, soucieuses de contrôler la compétence de leurs membres et régies par des codes de conduite susceptibles de servir de support à des sanctions, appliquées le cas échéant par l'organe disciplinaire de l'association... tout ceci modifie nos idées reçues sur la faiblesse panafricaine de la professionnalisation médicale en comparaison notamment avec les médecines assistées.

Les deux cas épinglés par le Dr Oyebola, les questions générales qu'il soulève et celles que nous sommes en droit de lui poser en prennent d'autant plus de relief. A vrai dire, il ne nous dit pas clairement dans ce texte si les deux guérisseurs incriminés appartiennent ou non à une de ces associations professionnelles et quelles sortes de sanctions pourraient-ils encourir si l'inefficacité de leurs traitements—notamment dans le cas de la blennorrhée—était mise en évidence par leurs pairs: en somme, il ne précise pas dans quelle mesure et éventuellement par quels moyens les associations médicales yoruba exercent un contrôle effectif sur l'efficacité des soins dispensés par leurs membres lorsque ceux-ci se disent spécialistes de maladies dont l'évolution est contrôlable sans le concours des outils de la médecine cosmopolite. Il me répondre peut-être que sa question est précisément là. Mais alors en quoi consiste, "évaluation de la connaissance" du candidat par les membres des associations et quelle place tient le contrôle du charlatanisme—entendu au sens yoruba—dans leurs codes déontologiques? Le lecteur reste sur sa faim quant à ce point important.

Par ailleurs, les deux cas examinés se caractérisent par la publicité donnée au traitement de deux affections désignées en termes empruntés au vocabulaire biomédical. Nous observons des phénomènes similaires dans beaucoup de villes et de marchés de brousse ouest-africains. Ils ont un autre caractère "trompeur" que j'aurais, pour ma part, souligné. A la différence du Dr Oyebola, les clients des guérisseurs incriminés—pas plus que leurs "thérapeutes"—ne disposent pas de moyens scientifiques pour mesurer l'hypertension ou pour identifier et pour suivre l'évolu-

tion de la blennorrhée. Ils peuvent se croire affectés par ces maux sans l'être au sens bio-médical. C'est un fait d'observation courant que la diffusion de la terminologie "cosmopolite" engendre en Afrique, comme ailleurs, de singuliers *contrats de langage* entre les prétendus spécialistes et les soi-disant malades. L'auto-diagnostic du "paludisme" et l'application extrêmement libérale de ce label médical (aux maux de ventre, aux nausées aux fièvres de toutes sortes, aux affections hépatiques...) en est l'exemple le plus banal. Sans se faire l'avocat du diable, l'on peut supposer que les deux "charlatans" mis en cause—comme du reste leurs collègues plus discrets et prudents—bénéficient de la résolution spontanée de certaines conditions pathologiques présentées par leurs clients (sous les dénominations d' "hypertension" ou de "blennorrhée"), voire qu'ils offrent à ceux-ci des remèdes efficaces dans d'autres registres que ceux qu'ils affichent sur leurs panneaux publicitaires. Je veux dire seulement par là que les critères objectifs retenus par le Dr Oyebola (le test *in vitro* et l'absence de mesure de l'hypertension) ne suffisent pas pour prouver l'inefficacité thérapeutique globale des deux guérisseurs épinglés.

Mais, l'essentiel du propos n'est pas là. Le Dr Oyebola aborde de façon tranchante et je dirais par le bout le plus facile—mais comment lui en tenir rigueur?—plusieurs questions centrales pour l'avenir des médecines africaines. La diversité et la dispersion ethnique considérables des traditions médicales africaines et de leurs praticiens semblent un obstacle majeur—objectif, éthique, politique—à leur intégration dans les systèmes nationaux de soins. Est-ce que les associations professionnelles de guérisseurs, là où elles existent ou celles que les initiatives des intéressés eux-mêmes pourraient susciter, là où elles n'existent pas, sont à même de s'organiser en quelque structure institutionnelle multi-ethnique (fédérative?) capable de *pérorer* leur reconnaissance officielle face aux représentants de la médecine cosmopolite? A supposer qu'une telle évolution soit concevable et souhaitable, quel les garanties de compétence, quel système d'admission et de sanctions, quels codes déontologiques pourraient-elles proposer en contrepartie de cette légalisation d'une sorte d' "ordre des médecines traditionnelles"? Et surtout à qui? L'on sait que le corps médical occidental façonné par l'éthique hippocratique tend à récuser les interventions de la justice dans ses affaires internes et fonctionne bien souvent comme un *corps juridique* autonome. Compte tenu des rapports de force actuels, est-il imaginable qu'un état africain puisse légaliser des institutions médicales issues de la tradition sans leur imposer du même coup la *juridiction propre*—et l'éthique—de la médecine cosmopolite?

Les exemples choisis par le Dr Oyebola sont parlants à cet égard: ils appartiennent au registre des démarches médicales *objectivement* efficaces (ou inefficaces selon les critères énoncés par la médecine occidentale. L'idée sous-jacente—que je n'attribue pas à l'auteur—est claire: s'il convient de protéger le public contre les pratiques objectivement inefficaces, l'on pourrait éventuellement légaliser celles dont l'efficacité aura été objectivement vérifiée par la science médicale? Autrement dit, choisisso parmi ces démarches celles qui satisfont aux exigences de nos

tests scientifiques et appuyons-nous sur les organisations professionnelles de ceux qui les pratiquent pour redéfinir et pour maîtriser le charlatanisme. Malheureusement,—et le Dr Oyebola ne l'ignore certainement pas—l'écrasante majorité des démarches médicales proprement africaines ne se prêtent pas à de telles procédures de vérification expérimentales. Les ressorts de leur efficacité sont à *rechercher* dans l'interaction des variables biophysiques et symboliques, psychologiques et sociales que nos connaissances actuelles ne permettent pas d'abstraire du *contexte sémantique* où elles exercent leurs effets. Le guérisseur, ses concepts, son statut professionnel, ses outils thérapeutiques, sa déontologie... sont partie intégrants de ce contexte et de cette interaction qui requiert généralement la recherche d'un consensus social, plus ou moins large, autour de l'action médicale entreprise. La professionnalisation et l'officialisation des médecines africaines sous la tutelle scientifique et éthique de la médecine cosmopolite modifierait considérablement les conditions d'exercice et par conséquent l'efficacité de ces médecines. Assurément, le Dr Oyebola a

raison de demander des comptes aux guérisseurs yoruba qui s'aventurent dans le champ sémantique de la médecine occidentale. Mais, la direction dans laquelle sa recherche nous oriente me semble révéler aussi le danger de la méconnaissance des arts de guérison africains et le risque de leur assujettissement professionnel et éthique à la médecine dominante. Quitte à être le cas échéant heurtés par leurs démarches ou par leur déontologie, nous avons à *découvrir*, et non à superviser, les arts de guérison en question. Les efforts d'intégration des guérisseurs africains dans les systèmes nationaux de soins risquent de manquer leur but tant que l'anthropologie médicale n'aura mis en évidence les mécanismes originaux qui différencient ces arts de la médecine positiviste de l'Occident et qui permettront d'établir les bases juridiques de leur autonomie.

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REPLY TO COMMENTS

I agree with the comments of Dr Bannerman. In answer to the two questions posed in the last paragraph of Dr Bannerman's discussion, I will answer "yes" to the first and "no" to the second. The advantages of the health professions acknowledging the healers and traditional birth attendants far outweigh the disadvantages. My recent articles on the practice of midwifery by Yoruba traditional healers focus on some of these benefits [1-3].

The point of making a distinction between various healers raised by Dr Bibeau was the subject of my recent publication [4]. It is pertinent to add that it is the *babalawo*, *onisequin* and specialists in bonesetting, psychiatry and midwifery that usually constitute membership of the herbalist associations. It is not common to find *Alasotele* (soothsayer), *Olorisa* (shrine priests) and the *olola* (circumcisers) belonging to these associations.

The "new administrative structures" Dr Bibeau mentioned is part of the process of adjustment and response to a rapidly changing socioeconomic and political climate in the Nigerian scene. Such processes will naturally involve some disruption of certain traditions in order to pave way for "modernisation". Certain traditions are however considered too sacred as it were, to be interfered with. Such traditions have persisted in spite of attempts to modernise. For an example, whilst the traditional healers now attempt to store their drugs in bottles [5] rather than wrap them with leaves or store them in calabashes as was the tradition, the traditions of assuming the correct posture, chanting incantations or observing certain taboos as the case may be while preparing some medicines have not changed.

I agree with Dr Bibeau on the two reasons he gave for the increasing number of herbalist associations in African cities. I have not attempted an exhaustive discussion of the subject and related issues. One of the problems facing the traditional healers in Nigeria today is one of obtaining government recognition [6]. Their associations make persistent representation to successive governors and health commissioners on this matter. It appears Dr Bibeau got a wrong impression that the healers are passive on the question of their recognition. The healers have been very vocal in this regard. They have seized every available opportunity to convince Western-trained doctors and relevant government functionaries on the efficacy of their treatment regimens and the need to accord them official recognition. They have participated actively in seminars and symposia on the subject of traditional medicine [7] to prove their point.

On the question of "constitutions and statutes" regulating the associations raised by Dr Bibeau, in my experience, very often, the healers pay for the services of a lawyer who drafts such documents to enable the associations meet one of the pre-requisites stipulated by the government before any association can be

registered. It is not unexpected therefore that the contents of such documents, legal terms apart, will mean very little to mostly illiterate healers. However, the interviews of the healers who participated in this study elicited, as stated in lay-terms, the main objectives mentioned in my paper.

I do not share the views of Dr Bibeau that national associations cannot exist for the time being. If the government has to give recognition to the healers, it is tidier administratively to deal with a national association, rather than several regional/local associations. This will also make it possible to draw-up a uniform guide-line for members. I agree it may not be easy for the several associations existing in many ethnic groups in Nigeria to form a national association on their own initiative. The struggle for position, ethnic/regional loyalty and agreeing on the rules and regulations of such an all-embracing association are some of the obvious problems that may hinder this process. However, if the government makes this a precondition for official recognition and financial support of the healers, the healers will most probably form a national association. The latter should be without prejudice to the continued existence of regional/local associations which will form branches of the central (national) association. If necessary, the government, in consultation with the healers, can set up such a national board or council of traditional healers by legislation and indicate the expected composition of this national body. I doubt whether healers, even in Zaire where Dr Bibeau had experience with traditional healers, will go against a government legislation, especially if it has beneficial implications for their practice. The effectiveness of such a national association will depend, to a large extent, on the powers vested in the national board or council besides the co-operation of its members. In this regard, the Institute for Herbal and Plant Medicine in Ghana mentioned by Dr Fosu and the not-too-successful associations in Malaysia mentioned by Dr Hegggenhougen are examples of national associations. Given time and government support, such associations will eventually establish a strong followership.

Not all healers in Nigeria and Mali for example, are rooted in a geographical area. There are in fact itinerant practitioners [6, 8]. Also, the scope of practice of various healers in Nigeria is wider than Dr Bibeau may appreciate [4]. In Nigeria, the choice of leaders of the healers associations is usually decided by popular vote amongst members. A healer's chance to lead and his being elected in such a democratic process are so closely interwoven with the healer's fame that the two (election and fame) cannot be separated.

The two sign-posts on hypertension and gonorrhoea treatments were meant to show a few of the exaggerated or misinformed opinion some traditional healers have about their capability. The figures were

not intended to draw undue attention to the negative aspects of the practise of traditional medicine. For instance, Figs 1 and 5 are complimentary to the healers.

I am aware of beneficial remedies from traditional medicine which have been made known through scientific research. A case that comes readily to mind from contemporary research in Nigeria is the beneficial role of *Fagara Zanthoxyloides* in sickle cell disease [9]. There is a sizeable body of literature on research into herbal medicine that has emanated from the Drug Research Unit (DRU) of the University of Ife, Nigeria. I made reference to the activities of the DRU in one of my published works [5]. Further information on the DRU can be obtained from the director of the Unit.

Finally on Dr Bibeau's comments, I agree that a multidisciplinary approach to a study of this nature is invaluable since it will allow a better interpretation of the data. It may be pertinent to state that the present study is of a preliminary nature. Plans for further studies takes due cognisance of the need for this team approach.

I agree entirely with the comments of Dr Dunn.

I agree with most of the comments of Dr Fosu. With respect to Fig. 2, I find it difficult to understand how someone who cannot measure blood pressure can treat hypertension. The same point was raised by Dr Bibeau. This is not intended to mean however that the drugs used by the healers may not have pharmacological activities. I agree that a collaborative study between scientific doctors and the traditional healers on the latter's treatment of hypertension is desirable. The healer referred to in Fig. 2 in fact admitted during the study that the diagnosis of hypertension is not made by him. He treats patients who come to consult him after being told in the hospital that they have hypertension. I had written on the method of diagnosis and investigation of diseases by Yoruba traditional healers [10]. I am aware that certain drugs which are inactive *in vitro* can be active *in vivo*. I cannot readily think of any antibiotic that falls into this category. However, I agree that there is need for further studies on the gonorrhoea medicine under reference before final conclusions are drawn.

Dr Heggenhougen's comments are valid and very informative. As indicated earlier, the type of association I am advocating is a national (central) association with regional/local branches. Specialist groups e.g. bonesetters, can have their own "specialist" associations, but they must still be members of the all-embracing national association. This will make for effective national control of the practise of the traditional healers. My publication in *Soc. Sci. Med.* 14A, 23, 1980 may answer some of the questions raised on "types" of healers *vis-à-vis* their prospects with respect to official recognition. Recognition of traditional healers, to my mind, should not be made "blanket cover" for all members of the national association. I am of the opinion that the points made by Dr Heggenhougen in the last paragraph of his comments, if adopted, will take care of possible assumptions on recognition/registration that membership of an all-embracing national association will entail.

Dr Maclean has studied Yoruba traditional healers extensively [11]. I agree with most of the points she

made. The professional associations described in this paper have no responsibility for group training. The method of training of Yoruba traditional healers in my experience [12] is similar to what Dr Maclean outlined. However, it is not unusual for two or three members of a professional association, who are already practising healers, to use the opportunity offered by a meeting of the association to discuss about difficult patients they have and receive advice from their colleagues on how best to treat the patients.

Many of the herbalists associations have existed before modern medicine gained its present level of popularity. It is most probable therefore that the associations are manifestations of the tendency of the urban Yoruba to join clubs which represent their occupations or social functions in the community, although the activities of these associations have, no doubt, been intensified in recent times in response to the aforementioned rapidly changing socio-economic and political climate in Nigeria as well as the increasing competition from scientific medicine.

I agree with Dr Maclean that the activities of African healers should not be regarded simply in terms of their utilisation of substances which may be pharmacologically active. The use of amulets, medicinal rings, incantations and sacrifice in the practice of African healers cannot be explained on the basis of pharmacological activities. More examples of this category of "medicine" can be found in my recent publication [5]. Maclean [11] drew attention to the harmful effects of "agbo tutu" in the treatment of convulsions in Nigerian children and this point was amplified by the experimental studies on *agbo tutu* by Oyebola and Elegbe [13].

Dr Zempeni will find more precise definition of the population involved in this study in my paper which has just been published [6] to which reference was made in the paper on which he is commenting. The two cases I have pointed out were not brought to the attention of the healers who are themselves not aware of the reservations I have expressed about the practice of their members. Making this type of inference is a sensitive point when one is dealing with traditional healers. It can generate a lot of ill-feeling. I feel that these and similar problems should be approached tactfully with the healers if one is to avoid marring the good relationship that have been established with them thus far. The latter is essential for their continued co-operation on future studies and any plan to bring them into the health care delivery team. The use of the genital, if discovered, is considered by the healers a criminal offence. Apart from expulsion from the association, such a matter can be reported to the police or to the elders in villages/hamlets where policemen may not be available. I do not think myself that the control exercised by the professional associations over their members has total coverage to merit being described as "effective". All one can say from this study is that there are provisions for the control of the practice of the traditional healers. The effectiveness of such control measures needs to be determined.

Evaluation of the knowledge of a candidate which Dr Zempeni is interested in knowing about is based on an oral interview and competence in practical

work as judged during a period of short attachment to a senior colleague.

I agree with the other remarks of Dr Zempleni. I have addressed myself to some of the issues raised by Dr Zempleni in response to earlier comments especially those raised by Dr Heggenhougen. I share the fears expressed by Dr Zempleni about scientific medicine attempting to set itself as the reference point in discussing "standards" desirable for African Traditional medicine. The dangers inherent in this approach are many. It is not intended that African Traditional medicine should be subjugated professionally and ethically to the scientific system. Many of the traditional healers themselves do not want this [6]. My way of looking at this problem is that the cultural basis of African traditional medicine should be preserved as much as possible. What one should strive towards, at least for now, is a working co-operation between the two systems. Traditional healers should play the major role in taking decisions that affect their practice. It is important however that scientific doctors and relevant government ministries should have minority representation on such decision taking bodies to ensure that a communication gap is not created.

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REMEDIOS CASEROS: MEXICAN AMERICAN HOME REMEDIES AND COMMUNITY HEALTH PROBLEMS

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Abstract—A sample of 1235 case examples of *remedios caseros* (home remedies) was analyzed to determine the morbidity patterns for "home treated" ailments in Mexican American communities in South Texas. A group of seventy most commonly encountered ailments was discovered, as described in the paper. An analysis was made of the variations within the morbidity patterns of these ailments in relation to the age and sex of the informant. Parallels are drawn between the research findings and the results of conventional morbidity research efforts.

Investigations of the patterns of community health problems in the United States are of relatively recent advent* and are normally pursued within the context of a demographic analysis of morbidity. While morbidity has been defined by Tomlinson [1, p. 138] as "the study of illness", the more commonly accepted definition is that of the United States National Health Interview Survey, which defines morbidity as:

basically a departure from a state of physical or mental well-being, resulting from disease or injury, of which the individual afflicted is aware. Awareness connotes a degree of measurable impact on the individual or his family in terms of the restrictions and disabilities caused by the morbidity [2, p. 42].

Most morbidity research divides illness into chronic or acute states and attempts to measure either the incidence,† prevalence‡ or both of biological and of psychological ailments. The protocols for the National Health Interview Survey state:

A condition is considered to be chronic if (1) it is described in terms of one of the chronic diseases on the "Checklist of Chronic Conditions" or in terms of one of the impairments on the "Checklist for Impairments"...or (2) the condition is described by the respondents as having been first noticed more than 3 months before the week of the interview.

An acute condition is defined as a condition which has lasted less than 3 months and which has involved either medical attention or restricted activity [2, p. 45].

The most common foci of morbidity research are either household surveys or institutionally based studies that attempt to look at morbidity in relation to hospitals, doctors' offices, clinics, etc. These research efforts normally attempt to measure the occurrence of disease states that are recognized by the medical system, using instruments developed for that

purpose [see 2, 3]. Unfortunately, the weaknesses of these studies are relatively numerous. Central to these weaknesses is the condition that morbidity is far more difficult to identify than the other major demographic measure of health, mortality. Death is a reasonably clear-cut event, and its cause can usually be traced to one or more of the entities listed in the International Classification of Diseases. On the other hand, as Peterson [5] clearly demonstrates, the recognition of an illness or ailment is an event that is based on the subjective interpretation of symptoms by patients or their families. To overcome this problem, some morbidity studies have turned away from clinical measures of health status and have developed a number of instruments designed to categorize and quantify the informant's life condition, including such nebulous states of well-being as happiness [see 6-7]. Unfortunately, as Mechanic points out, the indirect measure of "health status is so involved with subjective perceptions, social expectations, role demands, and value judgments...(that these measurements often become)...only poor approximations of the concepts the investigators wish to study" [9, p. 183]. And as Peterson [5, p. 239] indicates, a comparison of morbidity patterns across cultural boundaries becomes particularly perilous. This is partially due to the condition that the rank ordering of the importance of diseases to a community is normally based on quantitative evaluations of the reported incidence, or prevalence, of previously defined illnesses. This is a practice which is generally acceptable for a dominant cultural group, such as Anglo Americans in the United States, since the categories of illnesses being measured are relatively well agreed upon by both the informants and the evaluators. However, this agreement is not necessarily pertinent for ethnic groups or members of other cultures who recognize and behaviorally react to disease entities not recognized by the dominant group, and who may fail to recognize diseases that are a part of the medical model [5, pp. 235-244].

This paper presents an alternative method for exploring community morbidity patterns for groups where more conventional approaches either have not been undertaken, or cannot be conducted at present. The method utilizes an anthropological approach for the derivation of a typology of ailments, combined with quantification to allow the rank ordering of ail-

* As an example, national attention to morbidity data collection did not occur to any significant extent until the advent of the National Health Interview Survey (NHS) in 1956. Even now, formal demographic texts often pay scant attention to the subject.

† The incidence rate is equal to the number of new cases during a specified period of time per unit of the midpoint population [5, p. 236].

‡ The prevalence rate is equal to the number of persons diagnosed as having a condition on any given day per unit of the total population [5, p. 236].

ments in relation to their "prominence"* in the community. Developing a community based classification of ailments avoids the cultural bias of the methods previously mentioned, however, it produces its own weakness in that it does not generate incidence and prevalence rates comparable to other studies. This weakness can be considered minor, in light of the fact that the illness typology produced by this method can subsequently be used to generate surveys of morbidity, using more conventional methodologies, when time and financial resources (or interest) permit.

RESEARCH AREA AND POPULATION

The data for this paper were collected in the Lower Rio Grande Valley of Texas, commonly called the Valley by local residents. The Valley is composed of four Texas counties (Starr, Hidalgo, Willacy and Cameron) adjacent to the United States-Mexico border at the mouth of the Rio Grande River. It contains numerous small and medium-sized towns, the largest of which are Brownsville, Harlingen, and McAllen. The estimated half-million people in the Valley live in a nearly continuous "population strip" following the river and the railroad up and down the Valley in an approximately east-west direction.

Agriculture is the primary Valley industry, although assembly plants, *maquiladoras*, and U.S.-Mexico "sister" plants are being introduced into the local economy. This condition, along with the demographic spread of the population, has produced an area that is neither rural nor urban, but some inextricable combination of the two.

With the exception of the immediately adjacent border towns of Reynosa and Matamoros (Tamaulipas) Mexico, the Valley is somewhat isolated. The nearest towns of any significant size are Corpus Christi and San Antonio, 130 and 250 miles away respectively. This relative isolation, along with the extreme ease of movement between the United States and Mexico causes the Mexican border towns to have both a strong cultural, as well as economic impact on the Valley. Part of the impact comes from the nearly one million people on the Mexican side of the river who account for between 40 and 60% of the retail trade in the Valley, while they also provide a large labor pool that reduces upward wage pressures and makes both seasonal and permanent underemployment a chronic problem for Valley residents. The result is that the Valley contains the two poorest Standard Metropolitan Statistical Areas surveyed in the 1970 Census of Population. At that time the *per capita* income in Hidalgo County was \$1777 per annum, with over half of the population falling below federal poverty guidelines. There is no indication that the 1980 Census will significantly revise the economic profile of the area.

The demographic characteristics of the Valley are

* Prominence is defined as the likelihood that a particular illness will be presented in a case example of the home treatment of health problems, within the context of a non-directive interview that seeks to collect such treatments.

† The form was developed by Dr Mark Glazer, Department of Behavioral Sciences, Pan American University. The author would like to thank Dr Glazer for allowing him the use of the form for data collection purposes.

as interesting as its economic characteristics are grim. The population is young, over half being under 25 years of age, by current estimates. Approximately 80% of the residents are Spanish surnamed and/or of Mexican descent, another approximately 20% of the residents are Anglo American, and less than one half of 1% are Black. The area is distinctly bilingual and bicultural. The population dynamics of the Valley are further complicated by the presence of approximately 130-150 thousand migrant farmworkers who make the Valley their home, but who spend from 3-6 months out of the area participating in the migrant stream northward. Finally, an estimated 200 thousand winter residents, most of whom are retired, make the Valley their home between October and March. All of these characteristics combine to make the Valley an area of key interest for social research in the United States.

METHODOLOGY

The methodology utilized in collecting the data for this report combines the strength of an open ended case study approach for generating a community based typology of ailments (as opposed to testing for the presence of *a priori* categories thought to be important by the researcher) with the potential for quantification. Each case that was collected within a common format by being recorded on a data collection form.† The data recorded on the form includes the common name (either English, Spanish, or other languages) of the *remedio casero* (home remedy) and its English translation, if available; the scientific name of the remedy, if available; the type of illness or illnesses treated by the remedy; a description of the method of preparation of the *remedio*; a case description of a known use of the remedy; basic socio-cultural data about the informant (name, age, sex, address, where born, languages spoken); and identifying information about the interviewer/collector (name, address, etc.).

A sample of case examples was drawn from the over 2000 cases currently available in the ethnopharmacological archive at Pan American University. The archive cases were collected from members of three different U.S. ethnic groups and a large number of foreign nationals, however, only those cases coded as being presented by a Mexican American informant were retained for analysis for this paper.

The sample was drawn in a way that not only retained cases presented by Mexican American informants, but also assured that all of the cases presented by each informant would be contained in the sample. This was done to assure that the data could provide a preliminary estimate of the breadth of knowledge of various informants. The number of case examples presented by informants ranged from 1 to 29. However, this number should not be taken as the upper limit of knowledge of *remedios caseros* in the community. An upper limit of 25 cases was imposed on collectors as being the maximum number of cases that could be collected from a single informant without unduly taxing the informant's patients and goodwill. Thus, even though most of the informants presented far less than 25 cases (mean = 3.3; median = 2; mode = 1), there are individuals in the Valley communities who specialize in herbal knowledge called

yerberos, who know literally hundreds of remedies [see 10].

The sample contains 1235 cases collected from 378 informants ranging in age from 15 to 86 (mean = 50.5; median = 50; mode = 50). All of the informants in the sample identified themselves as Mexican American; 58.6% of the cases were provided by individuals born in the United States, while 41.4% of the cases were provided by individuals born in Mexico. A later report will measure whether or not there are significant differences in the *remedios* and ailments reported by these two groups. Women predominate in the sample; 85.4% of the cases (1050), where sex is identified, were collected from women, while 14.6% (179) were collected from males (6 had no sex identifier). This is generally representative of the study population, in that ethnographic data collected in the Valley indicates that women are normally the primary informants about *remedios caseros*. Therefore, the sample can be considered representative of the general knowledge about *remedios caseros* in the area.

The sample should probably be considered a convenience sample, since no effort was made to assure that the data collected for the ethnopharmacological archive would be amassed in a way that made it representative of any specific geographical or sociocultural characteristics of the Valley. Nevertheless, an inspection of the data indicates that it is consistent with the results of ethnographic research conducted by the author and others, and that the informants cover the demographics of the Valley area without

unduly clustering in any one area, age group, or social group. Therefore, the results are reasonably representative of the ethnopharmacological knowledge and practices of the region.

THE DATA

One assumption was made about the case data that is central to the results of this paper. It was assumed that when people were asked in a nondirective manner to recall *remedios caseros*, the ones they recounted would be either the ones they most commonly used or the ones that treated ailments that had been significant events in either their own lives or the life of someone important to them. In either situation, the most frequently repeated case examples are assumed to be the ones that represent a combination of common and key ailments in the community. Those less frequently presented are assumed to represent unusual or less frequently encountered community ailments. A total of 510 *remedios caseros* (both botanical and non-botanical items) treating 198 discrete illnesses were discovered in the sample. Within this field, there was clearly a core group of *remedios* that constituted the bulk of those presented in the sample cases. The 25 most frequently encountered *remedios* (4.9% of all *remedios* discovered) constitute 40.9% of the total cases in the sample.* Since each *remedio* is linked to one or more ailments it is obvious that there is also a core group of ailments which informants feel are amenable to home treatment. Although, it might be more accurate to state that each ailment is linked to one or more *remedio*, since new *remedios* were encountered and coded throughout the coding process at approximately the same frequency, while the ailments began to repeat very rapidly and almost no new ailments were added to the informant's ailment typology from the point when about half of the total sample was coded. The core group of ailments is presented in Table 1.

The sample produced a core group of 70 most frequently encountered ailments that are treated by *remedios caseros*. These remedies (representing 35.9% of the total 198 ailments) constitute 84.0% of all of the cases.†

This group of ailments is assumed to be an ethnotypology of health problems within Mexican American communities, especially those ailments that informants feel can or should be given home treatment as opposed to medical attention. The labels of the ailments (or conditions) were taken directly from the collection form, without modification. Those ailments that could be translated (or had been by the informants) are rendered in the table in English. Care was taken to assure that the exact English equivalent of a Spanish term was used and where there is no English equivalent, the Spanish was retained. In most cases, the informants provided the translation, but where they did not do so, matches were sought with similar cases, or other informants in the community were utilized to provide the translations. Some of the original list of ailments produced by this method were combined in the table (e.g. upset stomach and indigestion; or body aches and aches and pains) into a single ailment category, since informants tended to fail to be able to differentiate amongst the labels and used them

* The 25 most common *remedios caseros* are: manzanilla (cammomile) *Matricaria chamomilla* L.; *savile* (aloe vera) *Aloe barbadensis* Mill.; *ruda* (rue) *Ruta graveolens* L.; *yerba aniz* (anise) *Pimpinella anisum* L.; *yerba buena* (mint) *Mentha spicata* L.; *estafiate* (worm wood) *Artemisia mexicana* Willd.; *hojas de naranjo* (orange leaves) *Citrus aurantium* L.; *albacar* (sweet basil) *Ocimum basilicum* L.; *oregano* (oregano) *Monarda methaefolia* Graham; *ajo* (garlic) *Allium sativum* L.; *pelos de elote* (corn silks) *Zea mays* L.; *canela* (cinnamon) *Pulchea orodatta* (L) Cass; *romero* (rosemary) *Rosmarinus officinalis* L.; *borraja* (borage) *Borago officinalis* L.; *cenizo* (purple sage) *Leucophyllum texanum* Benth.; *nopal* (prickly pear cactus) *Opuntia* sp.; *Rosa de Castillo* (rose) *Rosa centifolia* sp.; *salvia* (sage) *Salvia leucantha* Cav.; *hojas de mesquite* (mesquite leaves) *Prosopis glandulosa* Torr.; *marijuana* (marijuana) *Cannabis sativa* L.; *nogal* (pecan) *Carya illinoensis* Koch; *comino* (cumin) *Arracacia atropurpurea* Benth. et. Hook; *golondrina* (swallow-wort) *Euphorbia prostrata* Ait.; *sacate de limon* (lemon grass) unidentified local plant; *el azajar* (orange blossoms) *Citrus aurantium* L.

† Table 1 was limited to those ailments which were repeated in the sample at least four times. Including ailments that represented approximately 0.2% of the cases (the other multiple example cases) would have increased the core group by the addition of 35 ailments, but would only have increased the cumulative percentage of cases by 7.0%, too large an increase for too small an addition to warrant their inclusion. The final 93 ailments were single example cases from the sample. Since they were not repeated, they were considered to be inappropriate for inclusion in the core group. In fact, the core group could easily be restricted to the top forty or fifty most commonly encountered ailments and still represent the bulk of the key morbidity problems found within the Mexican American communities of South Texas.

Table 1. Most common ailments treated by *remedios caseros*

Ailment	No. of cases	%	Cumulative %	Ailment	No. of cases	%	Cumulative %
1. Stomach ache	76	6.2	6.2	37. Stomach cramps	9	0.7	69.3
2. Cough	55	4.5	10.7	38. Toothache	9	0.7	70.0
3. <i>Nervios</i>	46	3.7	14.4	39. Ulcers	9	0.7	70.7
4. Colic	45	3.7	18.1	40. Asthma	8	0.6	71.3
5. Fever	43	3.5	21.6	41. Body aches and pains	8	0.6	71.9
6. Earache	38	3.1	24.7	42. Infected wounds	8	0.6	72.5
7. Diarrhea	36	2.9	27.6	43. Feeling rundown	7	0.6	73.1
8. <i>Susto</i>	36	2.9	30.5	44. High blood pressure	7	0.6	73.7
9. Upset stomach	36	2.9	33.4	45. Tired blood	7	0.6	74.3
10. Constipation	29	2.7	36.1	46. Mental disorders	6	0.5	74.8
11. Eye irritation	27	2.2	38.3	47. Mild rashes	6	0.5	75.3
12. Painful joints, arthritis	27	2.2	40.5	48. Mouth infections	6	0.5	75.8
13. Insomnia	23	1.9	42.4	49. Obesity	6	0.5	76.3
14. Sores (<i>granos</i>)	23	1.9	44.3	50. Pneumonia	6	0.5	76.8
15. Bladder infection	20	1.6	45.9	51. Tuberculosis	6	0.5	77.3
16. Burns	20	1.6	47.5	52. Hemorrhage	5	0.4	77.7
17. Kidney infection	20	1.6	49.1	53. Hemorrhoids	5	0.4	78.1
18. Diabetes	19	1.5	50.6	54. Hiccups	5	0.4	78.5
19. Intestinal parasites	17	1.4	52.0	55. Liver	5	0.4	78.9
20. Sore throats	17	1.4	53.4	56. <i>Mal de ojo</i>	5	0.4	79.3
21. Colds	16	1.3	54.7	57. Mumps	5	0.4	79.7
22. Boils (<i>tacotes</i>)	15	1.2	55.9	58. Pain	5	0.4	80.1
23. Bleeding	14	1.1	57.0	59. To keep away evil spirits	5	0.4	80.5
24. Heart problems	14	1.1	58.1	60. To sterilize wounds	5	0.4	80.9
25. Insect bites	14	1.1	59.2	61. Warts	5	0.4	81.3
26. Headaches	13	1.0	60.2	62. Cancer	4	0.3	81.6
27. Menstrual cramps	13	1.0	61.2	63. Infertile womb	4	0.3	81.9
28. Congestion	11	0.9	62.1	64. Insufficient milk for nursing	4	0.3	82.2
29. <i>Empacho</i>	11	0.9	63.0	65. Stomach infection	4	0.3	82.5
30. Gases	11	0.9	63.9	66. Sun stroke fevers	4	0.3	82.8
31. Acre	10	0.8	64.7	67. To induce labor	4	0.3	83.1
32. Anemia	10	0.8	65.5	68. Tonic for blood	4	0.3	83.4
33. Balding	10	0.8	66.3	69. Urinary tract infection	4	0.3	83.7
34. Cuts	10	0.8	67.1	70. Whooping cough	4	0.3	84.0
35. Late menstruation	10	0.8	67.9				
36. Bronchitis	9	0.7	68.6				
Total cases = 1235				Total ailments = 198			

interchangeably. The resulting list is assumed to contain only conditions that are considered by the informants to be mutually exclusive categories. If there is any error in the categories, it is probably in the direction of lumping together categories that should have remained separate rather than from retaining categories that duplicated or overlapped one another.

MORBIDITY PATTERNS

The core ailments can be assembled into groups of related illnesses which are useful for an analysis of some of the trends in morbidity derived from the data. Although these groupings do not represent a folk taxonomy of ailments, several interesting attributes of the morbidity patterns in Mexican American communities are apparent from an inspection of Table 1. The first is the inclusion of ailments that have no English equivalents and are basically of a magical or supernatural nature. These ailments are *susto*, *empacho*, keeping evil spirits away, *mal de ojo*, and *caida de mollera* (one case, not listed in the core group). They are the so-called Mexican American folk illnesses that have received such prominent attention in the anthropological literature, since the folk medical system makes this basic distinction between

natural and magical ailments [see 11-16]. The presence of these ailments, in and of themselves, guarantees that the morbidity patterns of Mexican Americans are different from those of Anglo Americans. However, caution should be maintained to avoid overemphasizing the prominence and importance of these ailments within the ethnomedicine of Mexican Americans. To ignore them because they do not fit the medical model would be a serious mistake, one which would distort the actual morbidity patterns in Mexican American communities, since these illnesses are "a departure from a state of...well-being of which the individual afflicted is aware" [2]. At the same time, these ailments represent only 2.5% of the total group of ailments in the sample and constitute only 4.7% of the total sample of cases. So the underemphasis of the treatment of other ailments, as has been done in the past, is equally inappropriate and produces an even more serious distortion of community health patterns in places such as the Lower Rio Grande Valley.

In addition to the folk illnesses, there are several other groups of ailments that provide insight into the home treatment of health care problems in Mexican American communities. These include digestive sys-

tem problems, upper respiratory ailments, infectious and parasitic diseases, injuries and environmentally produced ailments, other acute conditions, mental problems, and chronic ailments. These categories correspond, at least partially, with the groupings of illness most frequently presented in morbidity tables and articles. Since some of the ailments listed in Table 1 could potentially be placed in more than one of these categories, the list of ailments assigned to each is presented within the context of the discussion of that grouping.

The digestive system problems listed in the core ailment group include stomach aches, colic, diarrhea, upset stomach, constipation, gases, stomach cramps and ulcers. These ailments account for 20.7% of the total cases in the sample, which makes them the single most prominent group of closely related ailments in the community. This finding is consistent with other morbidity studies, since, as Cole [17, p. 36] indicates, problems with the digestive system are reported much more frequently amongst low income families than amongst families of moderate or high income.

The core group of upper respiratory infections includes coughs, sore throats, colds, congestion, bronchitis, pneumonia, and whooping cough. These ailments account for a total of 9.6% of the total cases in the sample. In most morbidity studies, upper respiratory infections constitute the largest single group of ailments [17, p. 34] with the common cold being the principle contributor to incidence rates. Colds rank 21st on the core group list, however, when the category "colds" is combined with two cold symptoms (coughs and congestion) the group cases equal 6.7% of the total sample and would rank first on the core list.

Infectious and parasitic diseases listed in the core ailment group include intestinal parasites, tuberculosis, and mumps, which account for 2.3% of the sample of cases. Public health morbidity reports from the Lower Rio Grande Valley all indicate that the rates for nearly all infectious diseases are significantly higher than elsewhere in the United States. Two factors, the poverty of the area and the proximity and ease of access to Mexico, are blamed for this condition. Yet, this condition does not appear to be reflected in the core ailment group. One explanation for this is that the majority of infectious diseases are now viewed as being best treated by medical intervention, and they are, therefore, no longer a part of the home treatment or ethnopharmacological system.

The category injuries and environmentally produced ailments includes eye irritation, sores, burns, bleeding, insect bites, cuts, wounds (2 categories), mild rashes, and sun stroke. These ailments represent 8.5% of the cases analyzed for this paper. These ailments are primarily first aid problems and are not easily comparable to the accident category that is presented in most morbidity studies [17, p. 35].

The final grouping of acute illnesses, "other acute illnesses", includes fevers, earaches, bladder infections, kidney infections, boils, headaches, menstrual cramps, acne, anemia, late menstruation, toothaches, aches and pains, feeling rundown, tired blood, mouth infections, hemorrhage, hemorrhoids, hiccups, liver problems, pain, warts, infertile womb, insufficient milk, stomach infection, inducing labor and urinary tract infection. The sum of all the cases in this group is

equal to 22.3% of the total sample of cases. The ailments in this group are very similar to the group of "other acute ailments" reported for the United States as a whole. Cole states the following:

Among the category of "other acute ailments" for females, about one-fifth were reported as genitourinary problems and one-eighth as deliveries and disorders of pregnancy and puerperium. Among males, over one-fourth of this residual category was reported as diseases of the ear, one-sixth as diseases of the skin, and about one-tenth as headaches. These conditions were also prominent among females [17, p. 35].

An inspection of the list of ailments in this category shows that these are also prominent ailments treated by home remedies. The comparison of ailments by sex is presented below.

Chronic ailments are normally separated out from acute ones for special emphasis in morbidity studies, and have even formed the topic of interest for specific studies. The chronic ailments found in the core group are arthritis, diabetes, heart problems, balding, asthma, high blood pressure, obesity, and cancer, which constitute 5.4% of all of the cases analyzed. Approximately one-half of the civilian non-institutional population of the United States commonly reports having more chronic conditions [17, p. 38], however, only 1.2% of the females and 3.0% of the males were considered disabled to the extent they could not work or do whatever they were doing prior to the disability [17, p. 40]. Listed in the conditions reported nationwide as most commonly restricting activity were arthritis, visual impairments, hearing impairments, high blood pressure, heart conditions, digestive conditions, and orthopedic impairments [17, pp. 40-42]. Obesity is generally not labeled as an illness in medically based surveys, while asthma and diabetes are not amongst the prominent problems listed by Cole for the United States as a whole. This makes a comparison of the ethnographic and demographic data difficult, however, it is interesting to note that both studies listed four ailments as prominent problems: arthritis, digestive conditions, heart problems, and high blood pressure. Equally germane is the growing concern in the Valley over the evidence that there is a higher incidence of diabetes amongst Mexican Americans than the country as a whole [18, p. 44]. Cancer was placed in the chronic illness category by the author, since its duration is often more than three months, but a similar treatment was not found in Cole [17], Peterson [5], Tomlinson [19] or Mechanic [9]. The other illness in this category, balding, represents a community health concern that would not be considered a high priority condition by the medical establishment, but is of concern within the community. It is discussed in more detail below.

The final category of illnesses derived from grouping the core ailments is the category of "mental problems". These include the categories *nervios*, insomnia, and mental disorders. *Nervios* is a broad condition that includes anxiety, irritability, and insomnia but has no exact English equivalent, either as a folk illness or as a medical condition. The category "mental disorders" includes depression, sadness, the relief of general mental disorders, and the restoration of sanity. The broadness and inexactness of definition of these

Table 2. Sex specific comparisons of frequencies of ailment case examples

Females				Males			
Ailment	No. of cases	%	Cumulative %	Ailment	No. of cases	%	Cumulative %
1. Stomach ache	67	6.4	6.4	1. Arthritis	9	5.0	5.0
2. Cough	50	4.8	11.2	2. Fever	9	5.0	10.0
3. Colic	44	4.2	15.4	3. Stomach ache	9	5.0	15.0
4. Nervios	41	3.9	19.3	4. Upset stomach	9	5.0	20.0
5. Earache	37	3.5	22.8	5. Constipation	8	4.5	24.5
6. Susto	35	3.3	26.1	6. Diarrhea	7	3.9	28.4
7. Fever	34	3.2	29.3	7. Sore throats	6	3.4	31.8
8. Diarrhea	29	2.8	32.1	8. Intestinal parasites	5	2.8	34.6
9. Eye irritation	23	2.2	34.3	9. Nervios	5	2.8	37.4
10. Upset stomach	23	2.2	36.5	10. Boils	4	2.2	39.6
11. Constipation	21	2.0	38.5	11. Cough	4	2.2	41.8
12. Insomnia	20	1.9	40.3	12. Eye irritation	4	2.2	44.0
13. Sores	20	1.9	42.3	13. Insect bites	4	2.2	46.2
14. Arthritis	18	1.7	44.0	14. Kidney infection	4	2.2	48.4
15. Burns	18	1.7	45.7	15. Backache	3	1.7	50.1
16. Bladder infection	17	1.6	47.3	16. Bladder infection	3	1.7	51.8
17. Diabetes	17	1.6	48.9	17. Feeling rundown	3	1.7	53.5
18. Kidney infection	16	1.5	50.4	18. High blood pressure	3	1.7	55.2
19. Colds	14	1.3	51.7	19. Heart problems	3	1.7	56.9
20. Headaches	13	1.2	52.9	20. Insomnia	3	1.7	58.6
21. Intestinal parasites	12	1.1	54.0	21. Sores	3	1.7	60.3
Total cases, female informants = 1050				Total cases, male informants = 179			

ailments makes a comparison of these problems with clinical mental health categories impossible until enough further research has been done to more precisely define them and their treatment within an ethnographic context. This category represents 6.1% of the total sample of cases.

AGE AND SEX COMPARISONS

Most morbidity studies include a comparative analysis of morbidity patterns by sex and by age ranked groups within the gender categories. The data collected for this paper were sufficient to allow a partial analysis of the sex and age related differences in home treated morbidity problems in the Valley. However, a certain amount of caution should be maintained in applying this data elsewhere, due to the relatively small number of case examples collected from male informants. Thus, this must be considered an exploratory, rather than a final analysis of sex and age specific morbidity problems.

Table 2 presents the 21 most commonly recorded ailments for all males and for all females, along with the frequency of reporting of each ailment within the respective group, but not for the total sample of cases.

Even a casual inspection of the rankings for the two sexes indicates a considerable divergence between the two groups, which is confirmed by computing a chi-squared statistic for the table that indicates that there is less than one chance in a thousand that the differences between the group was produced by chance alone ($\chi^2 = 621.3$, 27 df, $P < 0.001$). Thus, there are age specific differences in the reporting of *remedios caseros* by males and females which are probably linked to differences in their morbidity patterns (see Tomlinson [19], Cole [17], Mechanic [9] and Peterson [5] for discussions of the causes for these differences).

There were 10 ailments from Table 1, the core ailment group, that were collected only from female informants. These included colic (44 cases), headaches (13 cases), balding (10 cases), tired blood (6 cases), hemorrhoids (5 cases), keeping away evil spirits (5 cases), mumps (5 cases), infertile womb (4 cases), urinary tract infection (4 cases), and whooping cough (4 cases). Other multiple example ailments presented by females, but not by males, include *dolor del aire*, chills, babies' diarrhea, bad luck, deformities, bed wetting, nose bleeds, sprained joints, ringworms, dandruff, *paño* (dark spots on the skin), dry irritated skin, measles, loss of appetite, to gain weight, anxiety, face problems (spots, rough skin), help close navel on newborns, and to clean the uterus. There were seven conditions presented by males alone (restoring eyesight, clean out stomach, poison oak, keep teeth and gums healthy, stay awake, abscesses, and intestinal flu), but since they are all single example cases, it is impossible to assess their importance until the sample of cases from male informants is increased significantly.

Some patterns are suggested by the above data. A number of the ailments collected solely from women are childhood diseases, such as colic, mumps, and whooping cough, which suggests a much greater role of females in the treatment of these illnesses than for males. Others are "female problems," such as infertile womb (along with morning sickness, vaginal douches, yeast infections, which were not in the core group). The fact that no males reported keeping away evil spirits as a problem may be due to the greater role women in the community play in participating in religious activities. However, as yet there is no explanation, and not even a decent speculation, as to why only women reported balding as a community health problem, especially given that balding is in the top half of the core ailment group.

Table 3. Age and sex specific comparisons of frequencies of ailment case examples, ages: 17-44

Females				Males			
Ailment	No. of cases	%	Cumulative %	Ailment	No. of cases	%	Cumulative %
1. Stomach ache	21	6.8	6.8	1. Upset stomache	6	8.5	8.5
2. Nervios	15	4.8	11.6	2. Constipation	5	7.1	15.6
3. Colic	12	3.9	15.5	3. Intestinal parasites	5	7.1	22.7
4. Cough	12	3.9	19.4	4. Painful joints	4	5.7	28.4
5. Diarrhea	12	3.9	23.3	5. Diarrhea	3	4.3	32.7
6. Earache	11	3.5	26.8	6. Fever	3	4.3	37.0
7. Constipation	10	3.2	30.0	7. Sore throats	3	4.3	41.3
8. Susto	10	3.2	33.2	8. Stomach ache	3	4.3	45.6
9. Fever	8	2.6	35.8	9. Boils (<i>tacotes</i>)	2	2.9	48.5
10. Upset stomach	8	2.6	38.4	10. Colds	2	2.9	51.4
11. Eye irritation	7	2.3	40.7	11. Gas	2	2.9	54.3
12. Kidney infection	7	2.3	43.0	12. Nervios	2	2.9	57.2
13. Sores (<i>granos</i>)	7	2.3	45.3				
Total = 311				Total = 70			

The comparisons presented in Table 2 are further refined in Tables 3 and 4, which present the age specific comparisons of the most commonly reported ailments of males and females from the sample cases.

Age specific comparisons are commonly reported for the age ranks of 0-6, 7-16, 17-44 and 45 and over [17, p. 34]. However, there were only eight cases in the sample that were collected from males under the age of seventeen years old, so only the two comparisons of age ranks in Table 3 and Table 4 are presented. The reason for the difference in the size of the lists of ailments is that the lists were restricted to multiple example ailments reported for the males, and

the length of the female rankings was conformed to that of the male list of multiple examples.

Dividing the data into these groupings allows a three-way comparison of the listing of the ailments: between males and females in each of the two age ranks, and between the same sex informants in the two different age ranks. The differences between the ailments presented by the males and females within each rank is far greater than it would have been if produced by chance alone ($\chi^2 = 181.2$, 18 df, $P < 0.001$ for ages 17-44; and $\chi^2 = 254.7$, 33 df, $P < 0.001$ for ages 45+). This indicates that sex roles, occupation, cultural values and other socio-cultural

Table 4. Age and sex specific comparisons of frequencies of ailment case examples, age: 45+

Females				Males			
Ailment	No. of cases	%	Cumulative %	Ailment	No. of cases	%	Cumulative %
1. Stomach ache	41	6.0	6.0	1. Fever	6	5.9	5.9
2. Cough	36	5.3	11.3	2. Stomach ache	5	5.0	10.9
3. Colic	32	4.7	16.0	3. Diarrhea	4	4.0	14.9
4. Upset stomach	26	3.8	19.8	4. Kidney infection	4	4.0	18.9
5. Nervios	25	3.7	23.5	5. Painful joints	4	4.0	22.9
6. Susto	25	3.7	27.2	6. Backache	3	3.0	25.9
7. Earache	21	3.9	30.3	7. Bladder infection	3	3.0	28.9
8. Fever	20	2.9	33.2	8. Constipation	3	3.0	31.9
9. Diarrhea	16	2.4	35.6	9. Cough	3	3.0	34.9
10. Eye irritation	14	2.9	37.7	10. Eye irritation	3	3.0	37.9
11. Insomnia	14	2.9	39.8	11. Feeling rundown	3	3.0	40.9
12. Painful joints	14	2.1	41.9	12. Insect bites	3	3.0	43.9
13. Burns	13	1.9	43.8	13. Sores (<i>granos</i>)	3	3.0	46.9
14. Sores (<i>granos</i>)	12	1.8	45.6	14. Upset stomach	3	3.0	49.9
15. Colds	11	1.6	47.2	15. Asthma	2	2.0	51.9
16. Diabetes	11	1.6	48.8	16. Bleeding	2	2.0	53.9
17. Bladder infection	10	1.5	50.3	17. Body aches	2	2.0	55.9
18. Constipation	10	1.5	51.8	18. Boils (<i>tacotes</i>)	2	2.0	57.9
19. Headaches	10	1.5	53.3	19. Heart problems	2	2.0	59.9
20. Bleeding	9	1.3	54.6	20. High blood pressure	2	2.0	61.9
21. Congestion	9	1.3	55.9	21. Infected wounds	2	2.0	63.9
22. Kidney infection	9	1.3	57.2	22. Nervios	2	2.0	65.9
23. Heart problems	8	1.2	58.4	23. Pneumonia	2	2.0	67.9
24. Sore throats	7	1.1	59.5	24. Sore throats	1	2.0	69.9
25. Stomach cramps	7	1.1	60.6	25. Stomach cramps	2	1.0	71.9
Total = 678				Total = 101			

variables play a part in differentially shaping the morbidity patterns of home treated ailments in ways that are probably similar to those reported by Cole [17] and others for national and regional morbidity studies. Similarly, the differences between the two age ranks for informants of the same sex were significant. For females, the probability that the differences within the two lists of the top ten ailments for the 17-44 group and the 45+ group were due to chance alone were less than one in a thousand ($\chi^2 = 95.5$, 12 df, $P < 0.001$), and the probability that the differences in the top 10 ailments in each of the two male lists were also less than one in a thousand ($\chi^2 = 44.16$, 15 df, $P < 0.001$). These findings are consistent with other types of morbidity studies, which have shown that such differentials are due, at least in part, to the changing social environment for the individual at various ages and, in part, to the changing physiological characteristics of individuals of varying ages. Thus, all three comparisons produce results that are comparable with conventional morbidity studies.

SUMMARY AND CONCLUSIONS

The data presented within this paper indicate that an analysis of appropriate samples of *remedios caseros* can provide a considerable amount of insight into the common ailments treated in the home with ethno-pharmacological resources. Further, the morbidity patterns discovered by the analysis of this type of data parallel those from more conventional mortality research efforts, especially in that the patterns of the health problems collected from informants vary significantly in relation to the age and sex of the individual providing the information.

The ailments and groupings of ailments described in this paper are interesting not only for the patterns within the ailments that are included in the sample, but also for the patterns of ailments and groups that are not found in the sample. Since the majority of Mexican Americans in the Valley now have access to medical treatment, it can be assumed that *remedios caseros* are currently being utilized within the context of a total field of health resources that necessitate someone choosing between home treatment and medical treatment. Some ailments appear to be treated only in the home and others treated only by the medical establishment. Thus, the core ailment group was inspected for regularities that might suggest a rationale behind the choices that are made. The result is that the core ailments were subdivided into three groups: ailments having no medical treatment (e.g. *susto*, *mal de ojo*, etc.); ailments that do not normally require medical treatment (e.g. cuts, minor rashes, burns, stomachaches, diarrhea); and ailments that the patient perceives the medical system has failed to cure or eliminate (e.g. terminal cancer, diabetes, balding, or arthritis). The rationale for choosing folk remedies, then, may be a process of evaluating the symptoms an ailment presents, classifying it as a particular ailment, and pursuing treatment. If it is further assessed or categorized as being outside the scope of medical treatment, or if medical treatment has "failed", then, obviously, many people will opt for self help forms of treatment, rather than giving up hope. Naturally, some health problems are extremely ambiguous in their presenting symptoms, and patients

will decide to use both systems either simultaneously or sequentially, as discussed in Trotter and Chavira [10].

Future research, both in Mexican American communities and within other cultural groups, which follows or extends the format set out in this paper should produce valuable results in at least two areas. One is a delineation of the parameters of the system of choice that is operating; the factors which determine the course of treatment of an ailment pursued by a patient, both at given points in time and through a course of treatment. The second is in determining the nature and scope of the whole field of home health care and self help patterns, since these are not normally known nor are they commonly capable of being established by other methodologies, yet they appear to have a major impact on the health status of communities or regions where they are found.

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AMBIGUITY AND THE SEARCH FOR MEANING: CHILDHOOD LEUKAEMIA IN THE MODERN CLINICAL CONTEXT

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Abstract—The case of childhood leukaemia in the modern clinical context is a graphic instance of the social implications of advances on the margins of medical knowledge. Developments in the treatment of this condition have significantly altered rates of survival among sufferers. But knowledge has advanced unevenly and individual prognosis remains distressingly uncertain. A study of the families of 60 leukaemic children revealed how such technical shifts shape the experience of life-threatening illness and how apparent clinical gains serve to highlight remaining uncertainties. For such advance in medical knowledge complicates the search for meaning and predictability in the wake of threatening illness, and sharpens contradictions inherent in medicine itself and in its relationship to its wider social context. Observation of the impact of the disease revealed how medicine can be seen as ambiguous in a double sense: the more it appears to control, the more threatening is the domain where knowledge is still lacking; and the more it controls, the more alienated the layman *himself* from control over its effects.

"The real hell of this illness is that you just don't know!"

Parent of a leukaemic child

INTRODUCTION

The immediate concerns of this paper are the changing social and experiential implications of childhood leukaemia under conditions of modern medical management [1]. In the last decade, developments in the clinical context of the disease have significantly altered its course in most sufferers. Remissions of five or more years are now secured for up to 50% of children in many treatment centres, and a small proportion have survived much longer [2]. Inevitably, such changed patterns of intervention have significant psychological and socio-cultural implications; the very meaning of the disease is undergoing revision, both among clinicians and laypeople. Ironically, apparent clinical gains have heightened immediate medical and experiential uncertainties. Insight into etiology and into variation in response to treatment have not kept pace with chemotherapeutic advance, and prognosis in individual cases remains relatively unpredictable. In fact, knowledge has advanced in piece-meal fashion, its gains highlighting the vastness of remaining ignorance.

The condition of childhood leukaemia is a graphic instance of the state of knowledge on the margins of bio-medical science, of the manner in which the known becomes distinguished from the unknown in this domain. Our concern in this paper is the effect of this process upon the experience of those to whom such changing knowledge is applied. The case of childhood leukaemia shows clearly how advances of empirical knowledge may occur in seemingly uneven fashion—as when, for example, modes of intervention precede knowledge of etiology. These developments imply specific reformulation of the contrast between the certain and the uncertain, the predictable and the random, and the relevant and the irrelevant. Such

reformulation has systematic social implications, implications which shape the forms of clinical practice, but are as yet inadequately confronted and understood. As some historians of science have argued, the development of empirical knowledge implies the progressive reification and detachment of focal phenomena from the language and perceptions of everyday life [3]. In bio-medicine, this involves the translation of symbolically charged physical elements and processes into an ostensibly specific and value-free 'scientific' code. While this holds the promise of beneficial technical control, it removes these vital dimensions of ordinary experience from the commonsense world, or returns them to it with their meanings characteristically redefined. Such reformulation sharpens contradictions inherent in our wider cultural system, perceived acutely in the context of threatening illness—contradictions such as that between material and moral being, physical person and social context, and 'facts' and 'values' as dimensions of knowledge.

Our study of the impact of childhood leukaemia revealed this process in clear detail; the experience of uncertainty and the search for meaning were *the* characteristic features of the impact of the disease upon sufferers and their families. While these features are inherent in the experience of threatening illness itself, their striking form in this case was clearly the result of a particular set of developments in treatment. In this paper, we examine this relationship between advancing medical knowledge, its clinical application and its effects upon the sick. We place this process in its total socio-cultural context, and then discuss its implications for the social role of medical knowledge in general.

BACKGROUND: THE DISEASE AS SOCIO-CULTURAL PHENOMENON

Western medicine is inadequately perceived merely as 'scientific' knowledge, or as a set of specific techniques for intervention in somatically defined disease.

It is a function of an encompassing socio-cultural context and its concepts and modes of operation exist in continuous relationship with wider systems of thought and action. As has been suggested elsewhere, this relationship is apparently paradoxical [4]. Thus medicine in our society serves increasingly as a source of symbols and concepts for ordering everyday experience. As the 'science of life' it holds a privileged status in our culture. Its knowledge and techniques are given cogency and legitimacy well *beyond* their self-professed 'scientific' scope in the void left by retreating metaphysical schemes.

At the same time, both clinicians and laymen frequently find bio-medical knowledge and practice to be inadequate, if in somewhat different respects. This is because this knowledge and practice entail a set of cultural contradictions which surface, sooner or later, in the experience of us all [5]. Most significant for our concerns here is the contrast between what appears to be 'known'—i.e. marked and controlled in cultural terms—and what remains chaotic and inscrutable; and the contrast which develops between specialist and lay understanding through the advance of codified, empirical knowledge. The more that is formally 'known' about phenomena, the less accessible they are to the categories of discourse and experience in everyday life. Hence medicine is ambiguous in a double sense: the more it appears to control, the more threatening appear the domains where its knowledge is still lacking; and the more it controls, the more alienated the layman *himself* from control over its effects.

This paradox is particularly obvious in respect of a disease such as cancer, which has become a standardised nightmare in our society, and symbolic of these very ambiguities of technical control. Cancer serves widely as an emotionally charged metaphor for the inexplicable and for rank malignancy [6]. It represents an awesome marker of the limits of cultural control in general, and seems to call into question the effectiveness of current scientific knowledge itself [7]. In all societies, the death of a child represents a dreadful reversal of the cycle of human life; and the drop in child mortality in modern West renders the threat of childhood death another poignant symbol of the ironic relationship of 'cultural' control and 'natural' chaos.

THE STUDY

The data drawn upon here were collected as part of a study of the families of 60 children with acute myeloblastic or lymphoblastic leukaemia, admitted to a regional paediatric oncology unit in England between January 1976 and April 1977 [8]. Research focussed on the psychological and social implications of the disease for close kin and significant others associated with the afflicted children. Of particular concern was the relationship between the disease and its socio-cultural context. We wished to examine both how pre-existing socio-economic and cultural factors contributed to its impact and management and how the challenge of the condition itself, the confrontation with suffering, grief and death, articulated collective conceptions and values.

In this paper we discuss the normal—i.e. typical—

features of the illness process observed, rather than the minority of cases (some 25%) in which reactions were definable in terms of psychiatric morbidity. However, the structure of the situation described here applied to all families in our study, and focusses doubt on the appropriateness of established criteria for assessing its impact—criteria of psycho-social 'normality', 'coping' and 'adjustment'.

IMPLICATIONS OF THERAPEUTIC ADVANCE: CRISIS AND REMISSION

The effect of recent changes in the treatment of childhood leukaemia are thrown into relief when our findings are placed against the existing literature on the disease, most of which was written when long-term survival was rare. These studies emphasize that the predictable course of the disease at that time involved a sequence of three critical points: diagnosis, relapse and death [9]. Remissions then were relatively short-lived, and while they sometimes served to mask the inevitability of relapse, uncertainty typically centred on *when*, not whether the terminal phase would occur. Moreover, these studies describe a relatively standardised set of responses in the parents of sick children: the initial diagnosis was devastating, but emotional turmoil and disbelief soon gave way to a period of assessment, in which the event was evaluated in both practical and existential terms. This was the phase in which parents attempted to deal with feelings of guilt and responsibility. Studies stressed that this phase was generally cut short by pragmatic concerns and limited optimism when the child was released from hospital, often in a state of remission from symptoms of the disease. The second and more devastating crisis occurred when this brief reprieve was shattered by sudden relapse. Various standardised measures of emotional stress in parents (such as urinary OCHS levels) were high at this point than at any other in the course of the disease. In fact, the child's death was often more calmly received, accompanied by a certain relief—unless the decline occurred so rapidly that no preparation was made for the loss [10].

To date, published accounts of longer-term survivors are rare. One of the few available, however, presents a disturbing incidence of psychiatric distress in both the children and their families [11] and raises urgent questions about the psychological and social implications of survival under improved clinical regimes.

Our own observations reinforced this view of the social and psychological effects of improved prognosis. For the most striking feature of the condition is now the *unpredictability* of its course and outcome, which turns upon the starkest of alternatives—life or death. In fact, overall improvement in the length of survival of victims dramatically heightens the perceptions of uncontrollable threat in particular cases. Thus the hope of long-term (perhaps complete) remission becomes the preoccupation of all families [12], despite their awareness that the odds are unfavourable; and this hope is poignantly maintained against counter evidence. The course of the disease now becomes extremely difficult to define and classify. The significance of remission is not easily interpretable at

any point in a particular survivor's career; comprehending clinical predictions and translating them into conventional cultural terms is problematic. While the longer the child survives, the better his chances, relapse *can* occur at any time; and statistical attempts to factorize the risk of such occurrence are as yet of little help in particular cases. Hence prognosis is difficult to fix, and the illness is neither clearly 'acute' nor 'chronic' for much of its course, a pattern which does not fit established cultural categories. Like other forms of 'acute' illness, this one is threatening on impact; yet no defined phase of resolution follows. For the very meaning of the term 'remission' (i.e. the retreat of symptoms) is profoundly ambiguous, both clinically and experientially. Is it partial or total? When does long-term survival become apparent 'cure'? Periods of remission in leukaemia and related malignant disease combine both the everpresent threat of relapse with the more mundane uncertainties of chronic illness (such as how to manage the sufferer's ambiguous blend of 'illness' and 'normality'). The condition thus raises problems of meaning, management and communication, both in face-to-face and in less bounded social contexts.

CRISIS: THE EARLY PHASE OF IMPACT

While the 'typical' course of childhood leukaemia today is difficult to define in clinical and cultural terms, as a social phenomenon it displays regularities which serve to organize our present discussion. The first of these deals with the phase of impact [13], during which the disease is clinically diagnosed and the diagnosis is communicated to close adult kin, and sometimes, to the victim himself. Some aspects of this phase are a function of the impact of threatening disease everywhere; others are more specifically linked to current advances in leukaemia treatment.

The onset of leukaemia is often insidious. The child displays symptoms—e.g. lack of appetite, tiredness and aches and pains—which are easily attributable to trivial illnesses. Only when these persist, or there is a dramatic change in the child's physical and/or psychological disposition, is the possibility of serious disease usually recognized. Other more distinctive clinical features—pallor, bruising and petechiae, or bone pain—may also be misread by parents; and lack of first-hand knowledge of the condition by the primary practitioner may further impede diagnosis.

Such procrastination has distressing consequences once the nature of the disease becomes known. Parents who delay consulting a doctor feel guilt. If the primary practitioner initially misdiagnoses the condition, parents are resentful and may impugn his clinical judgement. The apparent deficiencies in the primary physician's competence are often heightened by the seemingly dramatic and specialist intervention which follows referral to a hospital. Once the child has been discharged, the problem of primary care is often exacerbated by a lack of confidence (both by the parents and the physician himself) in his ability to treat so special a case. Thus, while the hospital specialist becomes the object of optimistic faith, the primary doctor is frequently devalued, or made the target of anger and guilt. Here the effects of the mov-

ing margin of specialist knowledge upon perceptions and social relationships is clearly seen.

INTERPRETING THE DIAGNOSIS

We have suggested that in our culture malignant disease in childhood has particularly distressing emotive connotations, due not only to its inherent implications, but also, to its symbolic marking of the critical frontier of medical science. The most cogent initial response to clinical identification of the disease among the families observed was that they had been singled out to suffer the kind of irreversible misfortune that usually seemed "only to happen to others". Davis [4], in his classic account of the 'passage through crisis' of childhood polio victims, makes a similar observation: such threatening information taxes a family's sense of sharing in a common universe or experience and implies a position of marginality and collective stigma.

Among the families of leukaemic children, the isolating effects of receiving the diagnosis were modified once contact was made with a new group of reference, comprising others similarly afflicted. Here constructions of the event were reappraised in relation to a universe of comparable experience. As one mother put it:

When you first learn that your child has such a disease, your world collapses. You think: 'It can't happen to us? It only happens to other people!'. Then you get to the hospital and learn that there are others like you—and that helps. Not that you are pleased by their suffering; it's just that you're not alone in it. They've been through the same, or worse sometimes... But when you go home again, it's difficult. You feel different, and people avoid you. I suppose it's because they don't know how to take you. But it's upsetting—like you've all got the plague or something!

Sociological observations show that participants in ordeals of apparently uncertain course and duration (such as periods of imprisonment and hospitalization) seek to systematize information and construct norms against which to gauge their present state and future prospects [14]. The parents of leukaemic children performed similar activities. It was here that the implications of therapeutic advance and changing prognosis were clearly seen, for predicting the course of the disease in particular cases has become increasingly difficult. Families discovered that 'leukaemia' comprised a category of related clinical conditions, with differing individual implications for treatment and outcome. Moreover, within this category knowledge and technical control were unevenly distributed. The lymphoblastic conditions, for example, responded much more effectively to chemotherapy and radiation than these of myeloblastic type. But among acute lymphoblastic leukaemics, factors of disease and host further affect the chances of long-term remission. Information available to the doctor at present is both complex and piece-meal. International standardization of treatment procedures and the pooling of data on outcomes have made it possible to establish a series of risk factors in survival. Over a large series of cases, children with a particular sub-type of disease, blood composition, age and sex are more likely to survive. But the relative weight of these factors in overall survival remains unknown. And such general

predictive models offer little certainty in particular cases. Also, of course, they deal only with bio-physical factors: psychological and social dimensions have not been incorporated systematically in most orthodox research designs, and tend to be avoided by clinicians in discussion of etiology and prognosis (at least, in British contexts) [15]. Yet they are inextricably part of the *experience* of the illness for victim and family. For the clinician, the task of presenting the patient and/or the family with a coherent account of the disease and its treatment is formidable. We cannot dwell at length here on the particular strategies used by clinicians in our study. Most entailed the effort to deflect medical uncertainties and to encourage the family to avoid dwelling upon long-term and existential issues. Most common was the attempt to redirect focus from eventual outcome to the immediate future, specifically the period mapped out by the initial two or three year treatment schedule [16]. This is the "Let's take it from day to day until we reach this first hurdle" approach. Other doctors projected simplified and often apparently over-optimistic models, at times using statements of gross statistical probabilities to overcome the problem of complex risks. Doctors were often explicitly self-critical about the reductions they employed, acknowledging that they were resorted to most frequently in relation to 'less educated', working-class families. Indeed, the conceptual structure of medical knowledge translates more readily into terms of everyday middle-class communication, for both share essential features of the dominant bourgeois cultural idiom of our society [17]. But, in all cases, such communication occurs in emotionally charged circumstances, where the clinician perceives strong and urgent pressures upon him to appear efficient and definitive. As has been noted, such situations frequently lead to 'optimistic bias' on the part of doctors [18]. Pediatricians engaged in leukaemia treatment did, in fact, appear to be more optimistic in general about its implications than the more sober statistics of survival might have suggested to an observer. This optimism, and the frequent over-simplification of models of prognosis, are both clinical strategies for managing the complex and uneven nature of available medical knowledge.

The case of childhood leukaemia is an instance of Durkheim's classic assertion that science, inherently fragmentary and incomplete, cannot provide an 'impetus' to everyday action. The theories which make it possible for men to 'live and act' are thus 'obliged to pass science and complete it prematurely' [19]. Doctors in our study were seldom able, on the basis of available knowledge, to provide clear bio-medical guidelines for parents facing the uncharted course of the illness. Thus parents (and frequently, sick children) set about collating all available information in the attempt to formulate timetables and statements of probability for themselves. In doing this, they drew heavily upon knowledge of other laymen with more experience of the disease, and from the case-histories of other victims. A subtle process of cross-referencing occurred whereby parents sought to systematize the range of differing types of data at their disposal. In their efforts, however, they tried to maintain an optimistic definition of their case for as long as possible. They would thus stress similarities between their

child and others who appeared to be doing well, and avoid identification with those who appeared to be failing. Significantly, the quest was not only for prognostic certainty, but for an extension of clinical definitions to include psychological, social and moral dimensions. As time passed, progress of the condition itself often narrowed the limits of expectation; a relapse dispelled the hope of further long-term remission. But the process of classification, and the search for meaning in carefully collated bodies of evidence persisted for as long as the illness lasted. And each case of relapse and death occurring within the reference group presented a fresh challenge to survivors and their families.

The process of systematization also varied with the progress of the disease. At points of crisis—initial diagnosis, relapse and death—there was an expressed need to identify with others who had experienced the same affliction, to ease the isolation of being picked out to suffer irreversible tragedy. But when individual and collective definitions had reached relative stability, referencing often declined and other sufferers were avoided as possible sources of disorienting information.

The attempt to manage communication so as to maintain fragile optimism also reflects another feature of the changing relationship between what is formally 'known' and what is 'unknown'—i.e. the discontinuity between widely held lay images of leukaemia and those current in clinical oncology. In this case, rapid therapeutic advance in recent years has resulted in a significant gap. Lay people generally continue to perceive leukaemia as intractable, short-lived and fatal. Clinical diagnosis presents contrary, but bewildering information about variations in types of disease and treatment and about unpredictable possibilities of survival. Those afflicted now attempt to construct and maintain expectations which counter their own previously pessimistic, common-sense views (still shared by many others in the wider community, including some health care professionals outside the field of oncology).

In assessing how those involved seek a stable understanding of the illness and its implications, we are not dealing with unambiguous, uniform states of awareness, definable as 'realistic acceptance' or 'irrational denial'. States of knowledge which follow in the wake of such crises often display contradiction and situational variation, suggesting that the perception of threat to life (whether in the victim or those close to him) is a developing consciousness. Parents showed that this process often involved oscillation between contradictory responses—repugnance, guilt, optimism and despair. It follows that such processes are not easily reducible to stable descriptive models such as 'awareness context' [20], or to finite and unambiguous communications (often implied in the classic cancer literature on 'telling' or 'not telling' fatal prognoses). The referencing activities through which constructions of the illness process are formed by those caught up in it are expressions of the need to 'complete' seemingly inadequate clinical knowledge—to bring its definitions into line with everyday experience, and to transcend the stark and apparently arbitrary boundary between the formally 'known' and the 'unknown'.

THE MEANING OF AFFLICTION

An interrelated and crucial feature of the early phase of leukaemia (but one which recurred throughout its course) was the attempt to explain *why* it happened. Again, other sociological accounts of the experience of crisis suggest that this 'stock-taking' (what Davis calls the 'inventory stage') generally occurs once the critical peak and initial shock have passed. However, studies of the social role of Western medicine have not been particularly concerned with this quest for meaning, except to note that our medical knowledge addresses a relatively limited range of causal explanation of disease—the 'how' rather than the 'why' of illness; or its proximate 'cause' rather than its 'meaning' [21]. In the literature on childhood leukaemia all that emerges is that in the post-crisis period, self-searching and guilt give way to resigned acceptance if feelings of personal culpability are effectively allayed [22].

Our observations indeed confirmed that perceptions of guilt were significant in parents' attempts to impose meaning on the illness. The identity of children is generally regarded as a function of that of their parents, who feel practical and moral responsibility for their well-being and their suffering. Threatening illness is frequently seen as an assault on child-rearing capacities [23]. Hence the quest for cause and meaning in such illness is closely tied to the attempt to allocate responsibility for its occurrence.

But the search for meaning also reflects the widely observed effects of threatening and seemingly random events upon everyday assumptions and modes of knowledge. All cultures provide repertoires of explanation—theories—to account for and manage such events [24]. We, in the Western industrialized societies, have come to think increasingly in the idiom of 'scientific' explanation, in which 'objective' and 'neutral' principles serve to order the elements of a materially constituted world. Such theories are explicitly impersonal and amoral. They do not relate specific physical causes to more embracing social, moral or spiritual orders. Scientific explanation fails to account for the seeming random occurrence of a wide range of 'natural' events (such as the onset of disease). However, where such affliction strikes to the heart of everyday realities and resists control, it calls into question tacit assumptions about reality and the nature of human control. And it is in such cases—of which childhood leukaemia is typical—that the ambiguities of current bio-medical knowledge are most keenly perceived.

Parents in our study typically tried to bring the stunning diagnosis of leukaemia into relation with perceived medical facts, the experience of others and their own biographies and world-view. While the process was most intense during the initial phase of impact, the quest for a satisfactory explanation was, by its nature, inconclusive and continuous, often asserting itself strongly after relapse and bereavement. One mother remarked after the death of her child;

Well, now it's all over, and I have time to think again. I find myself going over and over the problem in my mind, just like I did at the beginning: 'Why did he get it? How does it start?'. You can drive yourself crazy with those sort of questions! Could it happen to the other children too? I

want to ask the hospital to let us know if they find that out—how it starts. Even if it's in 15 years, I'll still want to know.

In their search for an explanation for the onset of the disease, parents generally sought knowledge at two interrelated levels: first, that of proximate biological and medical cause (what has happened to the child's body?) and second, that of more ultimate cause (Why us? Why now?). In our society, bio-medical science and practice may provide satisfactory explanation and resolution for a wide range of afflictions, often (but not always) seeming to render more thoroughgoing metaphysical speculation redundant. But precisely *because* of its apparent wide applicability in everyday life, particularly in the wake of the decline of overarching cosmological systems, we are especially bereft when we have to face events for which no rational explanation or remedy is forthcoming. The search for meaning, in short, becomes a conscious problem under such conditions. Threatening illness strikes at personal identities and challenges everyday realities, calling for an interpretive framework to order fragmented experience; but the process of 'completing' scientific etiologies is not as automatic as Durkheim (*op. cit.*) and others have suggested. It founders on the essential Western cultural opposition between material and moral realities.

Precisely because this is so, both medical and popular speculation about possible psychological and environmental components in malignant disease serve as a bridge for moving from proximate (clinically framed) explanations to encompassing (cosmologically ordered) explanations. Despite the lack of clinical concern with psycho-social factors, the parents we observed reviewed their own biographies, passing from questions like: "Should I have breast-fed?" and "Could one X-ray in pregnancy have done it?", to more diffuse issues: "Could it be that I work with chemicals?" or "Perhaps it's because we live in such a filthy industrial environment?". The incidence of disease at present suggests no regional or socio-economic bias. Social and environmental factors in etiology were a concern both of working-class and middle-class families. About 10% of parents tentatively invoked metaphysical explanations: "It's a punishment for something we've done". Those who held strong beliefs in divine causation were less concerned with other aspects of etiology. But few found such encompassing reassurance, either from the doctrines or the representatives of the church. For most, nagging concerns about 'hidden' carcinogenic features in the everyday environment remained strong. Problems raised by this search for meaning reveal fundamental features of the structure of knowledge in our culture, and derived from the contradictions which characterise its social role. Parents reactions express the dilemma of relating the complexity of what is known about the disease to what remains stubbornly unknown, of reconciling, for example, how etiology can remain almost a total mystery while progress is made at the level of intervention (many perceived this as an inversion of common-sense assumptions about the logical priority of causal knowledge). Their problems also stress the contradictory detachment of bio-medical knowledge from the multi-faceted contours of ill-

ness experience. And, most fundamentally, they express ambiguous perceptions about efficacy and the absence of control in the everyday exercise of knowledge. Not surprisingly, physicians aware of problems in fixing the cause of the illness found it very difficult to confront them within the parameters of established clinical practice.

THE SOCIAL IMPLICATIONS OF UNCERTAIN PROGNOSIS

The uncertain prognosis of leukaemia victims has considerable impact upon the social relationships which surround them. In the first instance, the symbolic associations of the disease have patent effects upon everyday encounters for the families affected. As Strauss has pointed out, knowledge of potential fatality is disrupting of ordinary social encounters [26]. Others often reacted with embarrassment or emotion when confronting the leukaemic child or his family after hearing of the illness. This could be misinterpreted by the family, who resented being treated as 'contagious' or being patronized with sympathy. And these more usual components of threatening illness were complicated by the uncertain definition of the child's condition.

At the heart of the drama was the relationship between the sick child and his parents, often a source of agonizing difficulty. For parents generally felt it important to conduct as 'normal' a mode of domestic existence as possible and were strongly encouraged by the clinicians to do so. Yet such 'normality' was maintained in a domestic context whose meaning for them had been tragically redefined. Hence, apart from having to deal with the child's own perceptions of the illness and treatment [27], they had to face dilemmas in their relationship to him which stemmed from his own uncertain future [28]. How far a child should be made to conform to normal expectations (based on the premise of socialization of adulthood) or how far he (rather than the disease and treatment) was responsible for his behaviour was not easily resolved. As one mother put it:

They say: "Take him home and treat him as normal", But it's hardly a normal situation, is it? I mean, he's a different child, for a start. He throws tantrums for the least thing. He can't bear to be crossed. What I don't know is how much of this is due to the treatment and the leukaemia. So, do I punish him? It's hard when you think that it might not be his fault, and when you think of what he's got and all. If he's not going to grow up, what does it matter? But if we don't check him and he pulls through this, he'll be a little monster one day!

Indeed, a series of situational and cultural constraints (such as the child's ignorance of the condition, and the diffuse but widespread sanction in our society against dwelling on issues deemed 'morbid') tend to result in families striving to stifle any overt acknowledgement of the illness. Yet most reveal clearly that the illness radically alters the meaning of their lives, their values and their expectations for the future. And, while most faced the ordeal without manifest sign of collapse, the child's suffering, and the disruption of familial relations and quality of life, raised searching questions about the meaning of survival. Moreover,

as noted above, at least one longitudinal study of survivors suggests that these disruptions are a continuing source of emotional distress for children and their families [29].

REMISSION

Unlike the classic model of acute illness, malignancies such as leukaemia do not, under modern clinical conditions, entail an explicit stage of 'recovery' or resolution after initial crisis. Rather, early crisis is usually followed by a remission phase of uncertain length and status, during which major symptoms of the disease are in abeyance, but its clinical definition remains tentative. The family of the sufferer now has to reconcile their knowledge of the possible future implications of the illness with the seeming absence of serious symptoms. Many of the problematic features of this stage are in the uncertain nature of chronic illness itself—i.e. its protracted course, uncertain outcome and oscillation between apparent 'health' and 'illness' [30]. But the more usual stresses are here exacerbated by the every-present threat of fatal relapse, a threat whose likelihood does not simply diminish with the passage of time. As one father remarked:

It's on your mind all the time. In fact, it's worse once the first panic is over and everything is more-or-less back to normal. The heat is off, and other people now have their own lives to lead. And you sit here, when you're alone and wonder: "How is it going to turn out? Will she make it?". The real hell of this illness is that you just don't know. They can be fine for two years and then suddenly relapse.

In fact, the notion of 'remission' as the first clinical hurdle which victims must reach has come to symbolise the fragile balance of threat and hope which their survival connotes. The terms itself, widely associated with the clinical battle against disease which remains fundamentally intractable, entails a range of meanings which combine the notion of divine pardon with the retreat of symptoms. It represents in condensed form the entanglement of control and chaos at the frontiers of medical knowledge.

THE THREAT OF UNCERTAIN OUTCOME

The phase of remission entails the process of learning to live with the uncertain status and outcome of the illness. Here again, the changing prognosis of leukaemia is important. For the dramatic risks that this represents have to be reconciled with the apparent normality of everyday existence while the child remains symptom free. In theory, the longer the child survives, particularly after the suspension of chemotherapy, the better his overall chances. But, in fact, the proportion who remain in remission after three years remains very small [31]. Relapses thus continue within the reference group, some well after the suspension of active treatment. This, plus the fundamental clinical uncertainties as regards etiology and the effects of treatment mean that the therapy itself comes to be viewed by the families as rather unspecific or 'hit and miss'. It is generally understood as not yet capable of striking at the origins of the disease itself. While these ambiguities become more clearly deli-

neated in parents' perceptions, clinicians and other agents of care tend to encourage short-term optimism. Thus the overall contradictions in the predicament of family and victim become more marked over time, typically inducing oscillations in perception and mood from unreflective hope to fear and depression. As a result, at least one set of recent observers of this situation have characterised the experience in terms of the 'double-bind' hypothesis [32].

Both agents of care and most lay confidantes project strongly positive definitions of the illness and discourage speculation about possible loss. Families in our study perceived strong taboos against raising these issues in clinical encounters. Thus, while it was usually not the result of concerted strategy, both clinicians and lay people systematically deflected the expression of basic anxieties. Those seeking to reconcile the profound ambiguities inherent in the remission phase found little opportunity for ventilating these concerns. Even when parents' discussion groups were formally instituted by clinicians after our observations had ceased, initial reactions of those questions suggested that here too they felt constrained not to "upset those who were more hopeful by dwelling on morbid things". Family practitioners were turned to by some, but most responded by prescribing psychotropic drugs, which were regarded by parents as distressingly inappropriate. Here again, an existing cultural bias within our wider society and our medical practice discourages overt acknowledgement of mortality and related fears. The ambiguous definition of modern childhood leukaemia make projection of unquestioned optimism by doctor and lay person the predictable course of action.

The lack of opportunities for addressing these uncertainties in remission is heightened by the absence of markers intrinsic to illness and treatment which might signal longer-term prospects. The only 'bench-marks' which punctuate the protracted period of remission are regular clinical check-ups, which assume symbolic significance as hurdles, or pointers with which to map out the disease's uncharted course. At such points, families look hopefully toward the doctors for an indication of the relationship between the child's present state and longer-term outcomes.

I don't sleep before bone marrow day [33]. I still can't get used to it, and it's over a year now that he's been in remission. Even when they tell me that it's all O.K., I'm still down, because I keep hoping to hear more about his real progress. They say it like this: "He's fine at the moment!". And I think: "Dear God, but for how long? What does it mean for his chances?"

Families raised the problems of uncertainty and disorientation during the phase of remission with distressing regularity and symptoms of depression (feelings of despair, helplessness and hopelessness), had not abated in the majority of this 'typical' population eighteen months after the onset of the disease. Attempts to deflect doubt about treatment and concern about outcome exacerbate the effects of uncertainty. In our society, explicit avoidance of the practical and conceptual implications of death coexists with a stress on rational life-planning—both arguably the outcome of our perception of ourselves as self-determining, corporeal individuals. But these cultural

values appear to be tragically at odds with certain forms of experience, such as imperfectly controlled, life-threatening illness. The ambiguities of protracted remission are thus the outcome of deeper contradictions which shape the overall predicament: the contrast between the perception of illness and clinical definition; between the values of planning and predictability and seemingly random uncertainty; between technical control and chaos and between an ideology of rational meliorism and the 'meaninglessness' of suffering and mortality. While these contradictions are written into the very structure of our socio-cultural system, they are realized particularly acutely in the context of affliction and serious illness. And the increasingly aggressive intervention of modern biomedicine in the course of malignant disease has served to sharpen these oppositions, rendering more explicitly problematic both the experience and the management of clinical treatment.

CONCLUSION: ILLNESS, UNCERTAINTY AND THE PROVISION OF CARE

The situation of clinicians and patients in the treatment of childhood leukaemia is an expression of fundamental features of our society and culture, which themselves shape the direction and implications of technical advance in this domain. Because the form and direction of clinical knowledge is part and parcel of a more encompassing system of thought and action, it cannot be either evaluated or transformed in any simple, decontextualized manner. Thus, while it is now quite widely acknowledged in the social and health sciences that bio-medical criteria fail in themselves to define and manage the experience of illness, the implications of this for medical research and practice are more complex than is often supposed. As is increasingly being realized, the meaning of illness and medicine—if not defined merely as physical disease and neutral technical intervention—becomes profoundly problematic. It is then open to essential dilemmas of human value and meaning, which exist currently both in applied science and in other spheres of our formal and popular knowledge.

In relation to the predicament of childhood leukaemias and their families, simple remedies are likely to be merely palliative; the etiology of the more thoroughgoing malaise it represents lies in the very logic of our social and cultural forms. It is with the form and function of medical knowledge in our wider society that real consideration of the problems expressed in this study must begin. Like a host of previous social science investigations, the study of childhood leukaemia reveals the contrast between the meanings and values attached to illness by the sufferers and by clinical definitions. But this account suggests also that this relationship is not static; it is not dictated by an unavoidable or constant gap between formal and lay knowledge, a gap clearly justified by the efficacy of the former. It suggests, rather, that the moving frontier of bio-medical science rests upon a set of contradictions that increasingly widens the gulf, *opposes* formal and lay knowledge and raises basic questions about the meaning and value of biomedical science itself. Thus for parents in our study, uncertain physical survival (often at the cost of pain, confusion

and distress) gave rise to persistent doubt, not only about the nature of clinical intervention, but also about established professional definitions of health and well-being.

The reality of these concerns has to be acknowledged by those working for clinical progress, if the meaning of hard-won advance is not to become dangerously irrelevant to our perceptions of need. The important implications of intervention in malignant disease cannot merely be defined as 'psychological maladjustments' or failure to 'cope' on the part of a few unfortunate victims. Neither can they be delegated to agents of care ancillary to somatic medicine, such as psychiatrists or social workers, who are expected to assist sufferers in adapting to clinically defined realities. For it is precisely these realities which such illness experience calls into doubt. And failure to recognise this merely aggravates the victim's dilemma.

In practical terms, no neat professional solutions are at hand for the problems discussed here—either those of the sick, or those of the specialists who work to extend biomedical knowledge and advance their treatment. Yet, in an important sense, the solutions to both orders of problem are entailed in one another. For evaluations of technical developments should begin by acknowledging the ambiguous experience of the recipients of new modes of intervention. In the process of understanding the shape and origins of their distress, we gain insight into the complex social effects of uneven shifts in medical knowledge. It is only in this manner that we become aware of the multi-faceted implications of particular courses of technical advance, and the contradictions attendant upon all 'discoveries' in applied science. At the very least, this must engage the specialist in a process of self-consciousness—of seriously questioning whether current bio-medical definitions adequately reflect the parameters of human distress and suffering, and whether current clinical knowledge might not in fact exacerbate problems central to the experience of health and illness.

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13. We use the notion of 'impact' in a similar sense to Davis in his discussion of polio in childhood as an

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 15. Sontag [7] discusses some recent psycho-genetic theories of cancer in the U.S.A.
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ETHNICITY AND FOLK HEALING IN HONOLULU, HAWAII

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Abstract—This paper examines the significance of ethnicity in relation to folk healing within the context of a multiethnic urban setting. The principal findings that healers and clients are often not of the same ethnicity, that healers' practices are eclectic, and that healers and clients attempt to accommodate to one another's ethnicities are discussed. Implications of these findings for professional health care and general research are considered.

Folk healing has been studied virtually around the world but almost always within the context of one particular group of people. Notable exceptions to this unidimensional view are the research by Chen [1] in Malaysia and Kunstadter [2] in Thailand. Both found that in times of illness people of one ethnic group might utilize practitioners or techniques of other ethnic groups. The extent to which this phenomenon occurs has not been thoroughly investigated since the primary focus of studies has generally been on the health behavior of single groups of people.

Research on this subject has been even more limited within the United States, although there are reports which allude to people crossing ethnic lines for help. For example, Scott [3] has described research among five ethnic groups in Miami, Florida where there is some evidence of the crossing of ethnic boundaries to receive folk healing. Harwood [4] mentions that Hispanic and Black faith healers were available along with Puerto Rican spiritists in the latter's neighborhoods and that some clients went to more than one type of practitioner for help. Snow [5] states that she observed Blacks, American Indians, and Mexican Americans all consulting a Black healer in a southwestern United States city. Landy [6] found that a Tuscarora Indian healer was visited by middle and lower class Caucasians from Niagara Falls and Buffalo, New York. Significance is attached to these observations only in the last study where it is noted that the treatment of Caucasians partially accounted for the maintenance of the healer's social status in the face of Western medicine.

Settings in which ethnic groups are not geographically or socially isolated provide opportunities for healers to serve members of other ethnic groups and for clients to seek help outside their own ethnic context. Both possibilities, however, require accommodations to one another's cultural patterns and presume either that the participants are flexible in their orientations or that they do not rigidly adhere to exclusive practices in the first place.

There has, in fact, been some attention paid to the heterogeneity of healers and their work, although not with reference to their serving clients from other ethnic groups. Both Ramano [7] and Press [8] have criticized the stereotypic descriptions of folk healers which tend to imply that all those of one label (e.g.

curanderos) are the same. Press [9] has also suggested that this heterogeneity may be especially characteristic of urban settings. In an earlier study, Edgerton *et al.* [10] found that the urban healer contacted by them in southern California had less drama and ceremony in her work than did similar healers described in Texas and Mexico.

During the course of a study of folk healing in Honolulu, Hawaii, it was possible to investigate the significance of ethnicity both in terms of the healers' practices and beliefs and in terms of their relationships with clients.

THE SETTING

The research was conducted on Oahu, one of the seven inhabited islands of Hawaii. Although it has only 10% of the state's total land area and ranks third in size, it contains approximately 80% of the population and is the commercial and government center for the islands. Over half of the population reside within the capital city of Honolulu and its surrounding suburban areas which constituted the primary site for this study. The features of this multiethnic population are exceedingly complex. Following Barth's definition [11], ethnicity in this paper is discussed in terms of the ascribed status noted by one's self and others.

The following table from the OEO 1975 Census Update Survey [12] indicates the approximate ethnic distribution on Oahu. The categorizations are important because they are not the way in which the U.S. census reports Hawaii's population, but they are the way in which people in Hawaii classify themselves (Table 1).

A few explanations will clarify this table. Because military personnel are included in the survey, the figures for some groups, most notably Caucasians, are inflated. Statistics from a 1976 study [13] indicate that approximately 30% of the Caucasian population are military personnel, and if their numbers are excluded, Japanese are the largest permanent resident ethnic group.

Secondly, this is one of the few surveys which allowed an individual to specify an identity of Portuguese. In every day conversation, a person is not considered Caucasian if it is known that he is Portuguese, although some of the latter have chosen not to publicize their heritage because other Caucasians have tra-

Table 1. Ethnic groups on Oahu

Ethnic group	Percent
Black, Negro	1.4
Caucasian, not Portuguese	27.9
Portuguese	2.6
Chinese	5.6
Filipino	10.2
Hawaiian	0.9
Part-Hawaiian	14.4
Japanese	24.6
Korean	1.5
Puerto Rican	0.6
Samoa	1.0
Mixed (not part-Hawaiian)	8.2
Other	1.4
Total	100.3
Estimated population	678,979

ditionally held a higher socioeconomic status in Hawaii. The usual label for Caucasians is *haole* from the Hawaiian word for foreigner, but since the early sugar plantation days, Portuguese have not been included in this designation [14].

Thirdly, there remain very few people of exclusively Hawaiian ancestry, and part-Hawaiian has become the label for people who have any Hawaiian heritage. Finally, because of the substantial number of intermarriages, approximately 8% of the population are designated "mixed" in these statistics. Generally, the specific heritages are identified such as Caucasian-Filipino.

The local practice of referring to an individual as Japanese or Chinese when it is meant that the person is of that ancestry will be followed throughout this paper. Similarly, in common parlance, part-Hawaiians are often called Hawaiians and will be here since no full Hawaiians were identified in this study.

Although people's labelled ethnicity in Hawaii is based primarily on their background, there may be selective emphasis placed on it depending upon the social situation. Thus Cohen's emphasis [15] on the dynamic quality of ethnicity can also be observed. A brief description of the ethnic group interaction in Hawaii provides a basis for understanding the factors observed in folk healing.

Often promoted as the Aloha State, from the Hawaiian word meaning love, affection, and greetings, Hawaii does have a history of embracing people from Polynesian, Oriental, European, and American heritages and of encouraging them to live in harmony. Although there are conflicts between the various ethnic groups, charges of discrimination in hiring practices, occasional clashes in the schools, and considerable stereotyping of one another, there is little overt fear or violence.

One of the key factors in this benign situation is that there is no majority group in the state. The definition of minority status is thus dependent upon the social or economic context under discussion, and every ethnic group is able to claim some experience as a minority. Today, the newer immigrants of all ethnic groups often experience the most problems and prejudices both from within their own group and from others.

People in Hawaii tend to differentiate themselves from those of the same ethnicity in their country of origin and in the continental United States. Thus, "local Japanese" contrast themselves to "Japan Japanese" and "mainland (continental U.S.) Japanese". Because many groups who settled in Hawaii in the 1800's brought with them traditions which have subsequently changed in their country of origin, recent immigrants are sometimes surprised to find quaint words and antiquated customs being perpetuated in Hawaii. At the same time, because some groups have achieved an economic and social status unmatched by their counterparts in other states, they have influenced the cultural patterns and lifestyle in Hawaii.

Some observers discern a trend toward a "local" culture and identity which will override one's particular ancestry. While the designation of a person as "local" may at times refer only to non-Caucasians and does not yet have clear referents, its use is indicative of some blending of the various cultures into a new entity. There is considerable sharing of foods, non-English words, and customs, such as most people following the Japanese pattern of removing their shoes before entering a home. There is also a local dialect of standard English, commonly called "pidgin English", which is learned by most children regardless of ethnicity. The interactions in substantially integrated neighborhoods, schools, and places of employment have weakened rigid boundaries between ethnic groups, and there is considerable familiarity with one another as associates if not friends.

Still, Hawaii is not a melting pot where ethnic differences are overlooked. A person mentioned in conversation is frequently described by his or her ethnicity, and there is a general willingness to identify one's background. The extent to which individuals keep track of their heritage has resulted in people reporting that they are, for example, "Hawaiian, German, English, and Chinese". In all official statistics, such people are counted as "part-Hawaiian." It is also not uncommon for a person of mixed heritage to be considered a member of one group but to attribute a special skill to his inheritance from another. For example, a person who is labeled part-Hawaiian and therefore stereotypically indolent, may make a successful business transaction and jokingly attribute this to "the Chinese in me".

Hawaii, with the peoples' high degree of awareness of ethnic identities and with their sharing of experiences, though not without some conflict, brings into relief such issues as the relevance of ethnicity in health care. Although there is not always compatibility between practitioner and client, and although ethnic groups are not represented in proportion to their population among the various health professionals and paraprofessionals, services in Hawaii are, as a general rule, sensitive to the needs of this multiethnic population. Most major facilities have staff from several ethnic groups, and providers are accustomed to serving people from a variety of backgrounds. Language itself does not seem to be a major problem because of the general availability of someone to translate and because of the widespread use of English. It is estimated that approximately 93.3% of the adult population easily understand this language [16].

There is also very good geographic and financial accessibility to professional health care. Ambulatory medical care is widely available; no hospital restricts its admissions to a particular geographic area, and the entire state is divided into mental health catchment areas with state supported clinics.

Finally, Hawaii has a unique state law requiring employers to provide comprehensive state approved health insurance for any regular employee. It is estimated that this Prepaid Health Care Act along with other sources such as federal and state assistance programs, enables approximately 98% of Hawaii's population to have health insurance [17]. Folk healing is primarily an adjunct to the many professional services available, and it is not restricted to any one ethnic group.

METHOD

There are many ways of defining a folk healer, but for this study an attempt was made to take into account the context of an urban United States area. Thus, a folk healer was defined as an unlicensed individual with a public identity who practiced outside the realm of professional healing by helping people with physical and/or psychosocial problems. A review of these criteria will clarify the restrictive nature of this definition.

Unlicensed means that only those people who had not obtained official recognition of their practices were included. Acupuncturists, for example, who have been licensed in Hawaii since 1974 were excluded, as were masseurs. The significance of licensure as evidence of a move toward legitimation has been discussed by Cobb [18] in a study of chiropractors. The status and protection which licensure offers was recognized by some folk healers in Hawaii who obtained massage and ministerial licenses. Two healers, in fact, volunteered, as evidence of their legitimacy, that they had licenses, but these were revealed to be general excise licenses which are essentially for tax purposes in the operation of a business.

The healer of interest was also an individual acting in his or her own behalf. Neither representatives of nationwide personal growth or development groups which offer some counseling, nor clergy who represent particular churches and promote healing as an ancillary service at their church were included. While several identified healers did offer religious services for their clients, but not for the general public, their primary public identity was as an individual healer, not a priest or minister.

The public nature of their identity was a fourth criterion. Only those people who treated strangers as well as family and friends were considered folk healers. There are countless people who know a particular remedy or will offer advice to a relative or well known neighbor, but these people have no identity as a healer outside a small circle of acquaintances and do not offer a service to the public.

Finally, folk healers were seen as those who were not part of the professional health sector. A few practitioners such as medical and psychiatric social workers are not licensed in Hawaii, but they are widely recognized as members of the professional

Table 2. Ethnic group representation of Oahu population and healers interviewed

Ethnic group	Percentage of Oahu population	Percentage of healers interviewed
Caucasian	28	29
Japanese and Okinawan	25	29
Hawaiian and part-Hawaiian	15	17
Filipino	10	6
Chinese	6	11
Portuguese	3	3
Korean	2	6
Other	11	0
Total	100	101

community. In contrast, folk healers are neither seen by themselves nor others as part of professional healing.

Thirty-five healers from 8 ethnic groups were included in the study. It is unknown how many healers exist in Honolulu because they are a fairly well hidden segment of the medical system. However, it is estimated that the number located represent approximately half of the actively practicing ones, and they probably are the more accessible. As shown in Table 2, the percentage of healers interviewed in each ethnic group approximates the group's representation in the Oahu population.

Data were collected primarily through semi-structured interviews with clients and healers who were identified by my asking friends and acquaintances for referrals. Although most of the research took place between 1977-1979, contact with several healers and clients has continued to the present. Interviews with healers generally took place during the course of several visits over a period of months and focused on 13 broad topics which included demographic characteristics of the healers; their qualifications; their sources of referral; their diagnosis, treatment, and prevention techniques and beliefs; and descriptions of their clients. Interviews with clients followed a similar format with emphasis on their experiences with particular healers.

Information from interviews was supplemented with that obtained from participant observations. It was not always possible to observe treatment processes because of healer and client preference for privacy and because clients were often unavailable when the healers were visited. However, 16 healers were observed providing treatment, and these occasions suggested that there was a close correlation between what the healers said they did and what they actually did. One reason for this is that most healers had specific rituals or techniques which they used. Their advice and counseling were subject to much more individualization with each client, but samples of this type of intervention were obtained through interviews with healers and clients when the processes were not observed.

In 12 instances healers volunteered to perform their services on me. Some felt that this was the only way I could understand their techniques, and others simply felt that their ministrations would be beneficial even if I had no complaints.

Participant observation also included attendance at classes, religious services, gatherings, and fund raising events provided by the healers. Several group sessions were attended on a regular basis. I participated in the weekly religious services of an Okinawan healer for four continuous months and periodically into the present. A Japanese healer offered religious services three times a month and meditation and Buddhism classes weekly which were both attended for 7 months. One Hawaiian held what might best be called a weekend "open house" at which people sat and talked or sought treatment. I participated in these sessions on a biweekly basis for approximately 10 months.

Lastly, I worked for a Hawaiian healer 1 day a week for 2 years. He was one of only two healers who had an office, and I was his Saturday receptionist. My duties included answering the telephone, making appointments, collecting payments, keeping records of attendance at classes, and providing general assistance to him.

In general, healers and clients were quite cooperative, although secrecy was an important consideration for all participants, and this was respected. The establishment of an ongoing working relationship in which healers and clients felt comfortable in revealing their experiences and beliefs, took precedent over a structured gathering of statistics. Thus, when it did not seem feasible to ask a subject his exact age, this information was not obtained, except perhaps through inference.

GENERAL CHARACTERISTICS OF HEALERS AND CLIENTS

Although no healers refused to answer any questions asked, some were known to be reluctant to discuss certain aspects of their personal lives. Occasionally, they were heard giving misleading or evasive answers to clients' probings, and many clients knew few facts about the healers they saw. Table 3 reports the age and sex of the healers by ethnic group.

With the exception of the Caucasians, who were a much younger group, 92% of the remaining 25 healers were over 40 years of age, and the only age range which had all ethnic groups represented was that of

60-79 years. Twenty-two, or 63%, were women. This is related to their predominance in the 60-79 years age bracket since there was an equal number of males and females in the lower ages. Traditional patterns of women healers among Orientals may partially account for their large number, but economic considerations are also an important factor. Because they were older and not the main support of families, the women, as a group, were better able to engage in a potentially nonlucrative venture.

No healer's economic status could be determined by his or her healing alone. Thirteen worked part or full time in other employment to sustain themselves, and the remaining 22 relied on additional income from family, pensions, and savings. With one possible exception, healers were not becoming wealthy from their healing. One individual encouraged large contributions towards the construction of a church, but the funds received were committed to this, and it seems doubtful that they could have been collected if they had gone toward personal living. The single most damaging and common criticism of a healer was that he or she was "too commercial" or "expected too much money".

Twenty-seven of the 35 healers worked within their own homes which ranged from crude make-shift shacks in isolated areas to attractively furnished large homes in wealthy residential neighborhoods. Of the remaining eight, two Chinese worked in herb shops; one Hawaiian and one Japanese rented offices; one Chinese, one Hawaiian, and one Japanese typically made visits to their clients' homes; and one Korean saw most people in a shop unrelated to health which she owned and operated.

In terms of education, there was an extensive range from one who was illiterate to nine who were college graduates. This latter group included 6 Caucasians, two of whom had masters degrees in non-health related subjects; one Chinese; and two Hawaiians. Seven healers were immigrants from non-English speaking areas including: China, Japan, Korea, Okinawa, and the Philippines, but of these, only three had such limited English that interpreters were needed if a client did not speak the healer's native language. While the majority of healers had limited formal schooling, they made substantial efforts to increase their knowledge through self education in their chosen field.

Table 3. Age and sex of healers by ethnic group

Ethnic group	20-39 years			40-59 years			60-79 years			80+ years			M	F	Total
	M	F	Total	M	F	Total	M	F	Total	M	F	Total			
Caucasian	3	5	8		1	1	1		1				4	6	10
Chinese				3		3		1	1				3	1	4
Filipino								1	1	1		1	1	1	2
Hawaiian	1		1	2	1	3	2	2	2			3	3	6	
Japanese	1		1	1	4*	5	2	2				2	6	8	
Korean							2	2					2	2	
Okinawan							2	2					2	2	
Portuguese							1	1					1	1	
Total	5	5	10	6	6	12	1	11	12	1	0	1	13	22	35

* Includes one age estimated without substantial evidence and may belong in next older category.

Table 4. Healers' bases for treatment by ethnic group

Ethnic group	Religious tradition	Physical intervention	Spiritual intercession	Physical and religious	Physical and spiritual	Total
Caucasian		3	1	1 Protestant	5	10
Chinese	1 Taoist	3				4
Filipino				2 Catholic		2
Hawaiian	3 Protestant			1 Hawaiian	1	6
	3 Buddhist			1 Protestant		
Japanese	2 Protestant	1	2			8
Korean	1 Protestant		1			2
Okinawan	2 Buddhist					2
Portuguese				1 Catholic		1
Total	12	7	4	6	6	35

Examples of approximately 350 client-healer contacts were obtained from healers, from clients themselves, and from personal observations. However, the sensitivity of healers and clients alike to being interviewed and the healers' lack of complete data on many clients, resulted in only partial information being available. The missing data is, however, randomized throughout the total number of cases, and a general description of clients can be provided.

Clients represented a wide spectrum in age, education, income, and ethnicity. Every commonly identified ethnic group in Hawaii, including those with small populations and not part of this study, was represented. Approximately 70% were women, and the vast majority were adults, ranging from those of college age to those in their seventies.

In terms of their socioeconomic status, most clients had skilled or professional occupations and at least a high school education. There were welfare recipients who visited healers, and especially the older clients had limited formal education, but neither of these groups represented the typical client. Similarly, very wealthy and highly educated clients were in the minority, but they also constituted a proportionately small percentage of the total Oahu population.

Interestingly, many types of health professionals were clients including: physician, psychiatrist, osteopath, chiropractor, dentist, nurse, acupuncturist, psychologist, and social worker. The presenting complaints of these people and their reasons for seeking help from folk healers did not differ from those of other clients. They were unique among their colleagues only because they believed other types of healing than those with which they were associated might be effective. Some also held beliefs in the influence of supernatural factors, either of a religious or a non-religious nature, which they thought might affect their lives.

Clients generally determined, according to their own needs, the frequency and number of visits to healers. Thus, there was wide variation from a single visit to several times per week. Additionally, people might visit healers without clearly being a client. Their status could, instead, be former client who continued to visit, student, or church member.

Of the 35 healers, six Caucasians, two Hawaiians, and four Japanese, offered classes in personal growth

and development or in specific techniques such as body manipulations, herbs, or meditation. Four, including one Hawaiian, two Japanese, and one Okinawan, provided religious services. People who attended classes might or might not be active clients, while those who attended religious services were at least former clients, but perhaps not currently obtaining specific advice or treatment.

An estimate is that the busiest healer saw, in individual consultations, 20 people per week with one-fourth of these being new clients, and the average healer's practice was limited to about five clients per week. All indications were that healers were not busy by the standards of any orthodox medical practice, and this was the major reason that they were unable to derive a substantial income from their work.

While a few healers advertised, this was an ineffective way of attracting clients, and the vast majority of people were referred by word of mouth. Their presenting complaints covered both physical illnesses and psychosocial problems.

An analysis of 100 presenting complaints of physical problems revealed that 90% of these had been taken first to a physician, and in all instances of major illnesses such as diabetes, heart disease, and cancer, the clients continued treatment with their physicians and supplemented it, usually secretly, with treatment by a healer. In contrast, a review of 100 psychosocial presenting complaints showed that 90% were taken first to a healer. However, these were every day adjustment type problems at home or work, and most notably, with a spouse, girl friend, or boy friend.

There were no ethnic differences found in the type of problem presented, its treatment, or its outcome. Nor were there ethnic differences in client characteristics. The role ethnicity did play in healing encounters can best be presented in terms of the following categorizations: ethnicity in matching healer and client, ethnicity in the healer's work, and accommodations by healers and clients to ethnic factors.

ETHNICITY IN MATCHING HEALER AND CLIENT

In keeping with the common practice in Hawaii of identifying people by their ethnicity, all healers were known by the ethnic group to which they belonged. All, however, reported that they treated members of

ethnic groups which were different from their own in addition to clients who shared their ethnicity. In some instances clients were especially attracted to a healer because of his ethnic identification. For example, some sought Hawaiians on the basis of what they had read or heard about the power of these healers. Further, some healers identified their services in advertisements as an ancient Hawaiian or a Japanese healing art.

A particular ethnic identity could, then, be useful for a healer, but the primary determinant in client selection of healers was a recommendation by a trustworthy friend or relative who knew about or had seen the healer. Thus, two Chinese healers reported that the majority of their clients were Japanese because their reputations happened to have spread among a group of people all in the same ethnic group who knew one another.

One of these healers had been told by a client that someone had phoned a Japanese talk show program on a radio station and reported good results from seeing him. Other callers then phoned the station and were given the herbalist's name. He thought that it probably was an advantage having Japanese clients because they were likely to be more hesitant in questioning his technique than were Chinese.

In another instance, a Japanese woman who had entered into practice only a short time before the research began, was somewhat surprised that Portuguese Catholics and Hawaiian Protestants would want her to offer Buddhist prayers for their recovery from illnesses. Others who had practiced for many years were quite accustomed to seeing people from various ethnic groups come to them for help.

Those who offered regular Buddhist services for clients who chose to attend, had a majority of Japanese at these meetings. However, this was not an exclusive membership. The largest group, and the only one to identify itself as a church, although all of its members were clients, had as its president, a Mexican-American who had been a Catholic. In another group, a Chinese person who regularly visited a Chinese temple and who understood no Japanese had been attending the services of a non-English speaking Okinawan healer for over 20 years.

While some healers seemed to feel more comfortable with clients who might more readily share the same language and have some knowledge about basic beliefs or rituals, this did not lead them to exclude people from other ethnic backgrounds. A client's ethnicity was not elicited by the healer and was not always known.

Healers might speculate occasionally on a client's ethnicity based on his name or physical characteristics, but if it were not obvious because of mixed heritage, or a woman's married name, or unusual physical features, there were no questions asked. The healer, however, often took the client's presumed ethnicity into account in talking with him or her, and usually there was at least indirect confirmation or invalidation of these assumptions during the course of treatment.

ETHNICITY IN THE HEALERS' WORK

Table 4 summarizes the work of the 35 healers in terms of the major services offered.

All ethnic groups had healers who relied on a religious tradition. Although they were designated by themselves and others as followers of a specific faith, they were not necessarily affiliated with a church or formal organization. Treatment by the 12 who based their work primarily on a religion included the basic elements of prayer; psychic knowledge by the healer, who might claim to be only an instrument of a deity; and recommendations for action on the part of the client. The latter might entail offerings of food to ancestors or deities, prayers to be said for specified periods of time, and/or specific behavioral changes to improve relationships with others.

The six who combined religion with physical intervention might or might not include prayers depending on the client's and their own disposition. Their physical techniques did not differ significantly from the seven who emphasized physical intervention alone in the form of herbs, body manipulation, or diet prescriptions.

The 10 healers who relied on spiritual intercessions, either with or without physical interventions, were those who did not adhere to any specific religion, nor did they pray or practice religious rituals. They did, however, acknowledge the influence of supernatural forces in the form of spirits or energy from an internal or external source.

The categorizations provided here result in an omission of details and an incomplete picture of any one healer's work, but they are a way of conceptualizing the services offered by a broad spectrum of highly individualized practitioners. While it is clear that distinctions cannot be made on the basis of ethnicity, traces of the healer's ethnic heritage could be identified in most of their work. For example, massage and prayers in front of Christian statues associated with the Catholic Church were the basic practices of the Filipinos, and massage techniques based on Western European and United States teachings were the primary offerings of the Caucasians.

As was indicated in Table 3, the healers were generally an older population who had been exposed for many years to their own groups' cultural traditions. Still, their practices did not rigidly follow traditions, and their beliefs and supporting philosophies were even more subject to variation. Many of the medical practices and beliefs of the ancient Hawaiians were tied to their religion which was disrupted in the early 1800's and substantially destroyed under the impact of Christianity. Thus, much of the original knowledge is lost and imperfectly known by the Hawaiian healers of today. But other healers, too, indicated abandonment of more traditional beliefs. For example, a considerable amount of the underlying Chinese philosophy was no longer held important by the herbalists treating people.

Variations were found both within any one ethnic group and within possible types of healing. For example, it would not be possible to characterize easily a Japanese healer. Among the eight interviewed, three were Buddhists, two were Christians, two were believers in a non-religious but spiritual technique, and one was a practitioner of a therapeutic massage developed in the United States, but with similarities to Oriental massage.

Again, among five Japanese and Okinawan healers

who were labeled by themselves and others as Buddhists, one also received messages from Jesus Christ; one had an altar with 37 different gods represented and thought that one of the most important was Pele, a locally well known Hawaiian goddess associated with volcanoes; one emphasized *karma* while another believed *karma* had no meaning, and the fifth had little knowledge of Buddhism as a philosophy.

Finally, there were differences in the way these five structured their practices. Two had no religious training but offered regular religious services for clients, and one of these followed each service with individual readings of the clients present. Of the two who had been trained as priests in Japan, one never performed such services and restricted her help to individual sessions. The other offered services with occasional testimonials, but no consultations took place at this time and had to be scheduled on other days. The fifth was the only one who had no altar in her home.

While clients could and did change healers, they could not be assured that the practices or beliefs of healers in one ethnic group would be the same or that all those ostensibly following a particular teaching would be the same. Indeed, clients were known to, for example, leave one Hawaiian healer and try another whose ideas seemed more compatible with their own. They also were known to visit a healer of one ethnicity and if dissatisfied, go to another of a different ethnicity when they learned about him or her.

There were many sources for the variations and eclecticism in the healers' work. Most had acquired their knowledge over many years but not through apprenticeship. Rather, they had read, prayed, and thought, or gleaned ideas from discussions with clients and other interested people and from experiences at, for instance, churches or classes on special techniques.

There was evidence that healers were continually adding to, or reworking, especially the explanatory basis for the particular rituals or procedures which they followed. Many were familiar with popular literature or news articles on parapsychology and supernatural phenomena. They then incorporated references to ESP, spirit guides, vibrations, or other concepts into their discussions with clients, especially if the latter expressed familiarity with and interest in these ideas. The most active and popular healers were the ones who most obviously added current ideas in their conversations, but all healers seemed to make adaptations in their work to meet their clients' perceived preferences.

ACCOMMODATIONS BY HEALERS AND CLIENTS TO ETHNIC FACTORS

Healers were, of course, keenly aware of their dependence on clients for their continued existence in their chosen work. As described earlier, none was busy or financially secure in his or her practice, and there were strong practical reasons for accommodating as many clients as possible. At the same time, all the healers seemed genuinely to believe that they had an ability or technique which could be helpful to people, and they wanted to share it.

While a healer's sensitivity to clients varied, there were many instances of healers either trying to find

analogous explanations of rituals in the experiences of the client's own ethnic group or of actually changing some rituals for the client. For example, several times on the telephone I was mistaken for a Japanese person. A Hawaiian healer whom I contacted, talked about her work and likened many of her practices to elements in Japanese martial arts, emphasizing that a master of one such art had come to her for help with physical complaints. When she learned that I was not Japanese but Caucasian, she immediately launched into a discussion of the missionaries in Hawaii and the importance of Christian teachings.

In another instance, an Okinawan Buddhist healer, who typically recommended that clients pray before a Buddhist altar and make offerings to ancestors, told Filipino Catholics to offer wine to Jesus Christ.

Similarly, there was evidence that clients made intellectual adjustments in order to follow a healer's advice. One way was through selective compliance. A Japanese person who had found impractical some rules set forth by a Hawaiian healer used other statements made by him as rationalizations for disregarding the rules and simply did not mention that she was not following all of his advice.

There was also reinterpretation of events. One Caucasian who was interviewed at what was objectively a Buddhist service blithely stated "it's not really Buddhist because there is one God with everyone else as helpers". This person did not consider himself a Buddhist and denied the existence of many elements in the service, but he had been attending regularly for several years and was successfully obtaining help for a psychosocial problem.

A third way found useful by some clients was to identify analogous beliefs or practices common in their own ethnic group. Specific concepts such as spirits or "energy" and specialized techniques and rituals such as massage, offerings, and prayers, can all be translated into one's most familiar idiom and context without too much distortion. In some cases, subtleties were lost anyway because the healer and client spoke different languages. A member of the healer's family or the client's friend or relative might serve as interpreter, or there was dependence on minimal English. These solutions did not allow for sophisticated verbal exchanges, but they did foster the client's reliance on his own beliefs or ideas.

CONCLUSION

To the extent that Honolulu represents multiethnic settings, especially in United States cities, this study suggests that one cannot assume that people seeking help from folk healers are seeking it only within their own ethnic group. In so far as groups interact with one another in social situations, it is likely that they will also do so for health problems. The healers in Hawaii who had the broadest representation of ethnic groups and the greatest number of clients outside their own group were the part-Hawaiians who also have intermarried at the highest rate and have traditionally been open to interactions with others. In no case, however, was the crossing of ethnic lines considered a rare phenomenon, and the examples presented here are not unique but clear illustrations

of the types of interactions in the folk healing encounters studied.

The need for clients and professional or folk healers to have shared world views, especially perhaps in psychotherapeutic endeavors as delineated by Torrey [19], cannot be underestimated, but this sharing is clearly not bound within one's ethnic group. There would seem to be common elements shared by participants in folk healing regardless of ethnicity, and an identification of the factors which need to be shared might be more worthwhile than attempts to match healers and clients by ethnicity.

This is further supported by the second finding that healers' practices and beliefs, while having some basis in their ethnic backgrounds, are quite heterogeneous and eclectic. The common assumptions that people are attracted to folk healers because of a compatibility based on their ethnic heritage and that exotic ethnic services are being rendered bear reevaluation.

Similarly, clients cannot be thought of as purists anymore than healers can be. In urban multiethnic settings, where there is exposure to different peoples and dissemination of information through mass media, there is an especially strong impetus towards change in the traditional knowledge about health matters. Kay [20] notes that among Mexican-Americans in an urban area of the United States, many of the folk concepts about illness had changed from those reported in the literature less than 10 years earlier and that even when the words were the same, some of the meanings were different. Thus, the compatibility clients are seeking with healers may not be based on ethnicity or common knowledge about their own ethnic group practices.

Finally, the findings with regard to accommodations by healers and clients lend support to the possibility that folk and professional healers can successfully establish therapeutic relationships with people of differing ethnic backgrounds. The healers' general willingness and their abilities to modify their practices and provide palatable explanations for events or prescriptions were undoubtedly increased by their interactions with other groups in a multiethnic setting. Similarly, the clients' tolerance for advice which was not always congruent with their own beliefs was probably heightened by their experiences in handling such events in every day living.

Still, the accommodations made by both providers and recipients in folk healing emphasize a process that can and does occur in many medical treatment situations. Here the vast majority of clients with physical complaints had already consulted a physician, and only those with every day adjustment type problems chose to go first to a healer rather than a mental health professional. Thus, this study highlights the accommodation process because the participants were not forced into dealing with each other by a medical urgency or by unavailable alternatives.

The relevance of ethnicity as a variable in people's health behavior, in the relationships established between practitioners and clients, and in the services offered by folk and professional healers cannot be dismissed as insignificant. It is necessary, however, to

analyze exactly what role ethnicity is playing in these situations without assuming that there is a one to one correspondence between one's ethnicity and health beliefs, practices, or preferences.

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HOT-COLD CLASSIFICATION: THEORETICAL AND PRACTICAL IMPLICATIONS OF A MEXICAN STUDY

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Abstract—Hot-cold food and medicinal categories from one Mexican community (Mitla, Oaxaca) are examined to describe general principles of classification, dimensions of use, and potentials for change. Intracultural variation in hot-cold knowledge and related dietary and medicinal practices are discussed to demonstrate how within one culture general structural principles of hot-cold balance can be shared, while content varies; also how knowledge is communicated so that use of hot-cold is retained in spite of differences in judgment and usage among population members.

Findings from this community are then compared with those from other Latin American communities and with data on hot-cold usage in the Near East, Far East and other Old World communities. While Mitla differs from many other Latin American communities in that hot-cold reasoning does not interfere with delivery of health care or acceptance of nutrition information, it is similar to them in that hot-cold is not an all pervasive cultural idiom, but is the major idiom in which the qualities of foods and their beneficial or harmful effects on the body are discussed. By contrast, in Asian medical systems, hot-cold is the major idiom for discussing moral, social, and ritual states, in addition to the qualities of foods and medicines; but it is only one of a number of concepts for discussing health, humors, and foods. Implications of between and within cultural variation for reporting illness beliefs and formulating health policy are discussed.

Medical anthropology faces an admittedly formidable yet equally critical challenge in studying, describing and analyzing more thoroughly the humoral pathology aspects and hot-cold syndrome of folk medicine... [1].

Though the statement above was meant to stimulate a literature review and analysis of the Philippines, if not the greater area of Southeast Asia [*Ibid.*], the topic has much wider relevance as Western allopathic practitioners seek to rationalize traditional and modern diet and medicinal regimes in many different parts of the world. The hot-cold principle in medicine, which refers to intrinsic quality rather than thermal temperature of foods, medicines and particular body conditions, has been persistent in history and currently is very widespread. In spite of variations in hot-cold theory and practice among members of different cultures and even within the same cultures, the dimensions by which particular hot-cold systems vary and the mechanisms by which they are perpetuated within particular cultures in spite of intracultural variation have not been thoroughly studied.

Generally it has been assumed that all Middle Eastern, European and "New World" (including Philippine) hot-cold systems derived from the Greek humoral systems, transmitted from Greek to Arabic to Renaissance Europe and then westward [1-4], and that these differ from more or less parallel hot-cold systems in Far East, Southeast and South Asia, each of which is guided by its distinctive interpretations of basic universal elements, their combinations into humors, and their flux within the world order [1, 5]. It has also at times been taken for granted that members of the same culture share the same principles of classification if not the same categories [6]

and only infrequently have possible sources of variation been investigated [7]. They indicate the need to systematically review the philosophical and practical dimensions by which hot-cold systems vary in different cultural contexts if we are to understand and compare how different cultures organize and interrelate "medical" and other kinds of information. In addition to logical questions of hot-cold category formation, cultural symbolism and their relevance for medical behaviors, a whole set of social dimensions beg analysis and cross cultural comparisons: (1) To what areas of activity and thought does hot-cold apply? What are the modes of evaluating states of health and disease, and of classifying ingredients and effects of foods and other items? (2) How rigorously is the hot-cold system followed? Does this vary systematically by social category or social context? (3) How much intracultural variation is there in classification and categories within the system, and how can one systematically account for it? (4) What is the relative priority of looking to hot-cold as opposed or in addition to some other dimension for food, medicinal classification or disease explanation?

The present essay will review these issues as part of an introduction to and discussion of a case study of hot-cold classifications and use among Zapotec Indians and Mestizos in Mitla, Oaxaca, Mexico. It will be shown how their usage of the hot-cold idiom, in many respects typical of hot-cold reported from elsewhere in Latin America [2] differs from the use of hot-cold symbolism in the diet, medicine, and greater cultural concerns of Old World (and other indigenous New World) cultures. Symbolic cultural and applied medical implications of these findings will then be addressed.

BASIC FEATURES AND THEIR RANGES OF VARIATION

Hot-cold as an ordering principle which provides both explanation and guidance can be found among peoples in all parts of the world and at all levels of social organization. Various authors have suggested that the idiom derives ultimately from internal physiological sensations of heat and cold [8-9], perceptions of interpersonal social and psychological relations [3], or other awareness of natural or cultural "heat". Whatever the origin, in various cultural contexts, the hot-cold dimension has been used to organize and order not only notions of health, but also parts and states of the natural environment [10-11], the ritual environment [11-12], social status [12-13], ritual status [9, 12, 13] and world view [14]. Hot-cold "symbolic projective systems" [3], have been used to express a fundamental cosmological duality [15] (in some cases without particular attention to a hot-cold dimension of human health and well being or food and medicinal classification [1]), and to distinguish between dangerous or sacred states including illness [16], in which the social being is in touch with cosmic power [9, 12]. The numbers of sensory or symbolic phenomena and domains which may be coded and inter-related through the terms hot-cold are potentially limitless. Social scientists have recognized the challenge not only to discover for each culture the areas of human thought and activity so structured, but also the domains which natives consciously interrelate in lore and practice [9, 17].

Of particular interest for the present discussion are hot-cold syndromes and systems of humoral pathology which relate to diet, medicine, health, and behavior. These view health as a balance of opposing or complementary (hot-cold) qualities and illness as an imbalance or alteration in one quality. Where such terms are used, all body conditions, foods, and medicines can be potentially classified as some degree of hot-cold and are interrelated along with other activities, social relationships and environmental factors to produce particular hot-cold conditions in individual bodies. The general rule for health maintenance is avoidance of extremes of any one quality. In the event of imbalance (illness), the procedure is treatment by the principle of opposites. The particular body condition is analyzed to be one or the other quality and is brought back into balance by introduction of quantities of the opposite quality.

Humoral systems though sometimes discussed as if they were all derivatives of Classical Greek and Eastern high cultures, can be found in many different forms throughout the world. They may be constructed of simple dimensions (only hot-cold) as in Latin American [2], Philippine [1], and certain New Guinea cultures [18], or compound (hot-cold, wet-dry) qualities as in Classical Greek and Arabic [19, 20] of which hot-cold provides only one dimension of analysis. These humors may be conceived as distinct qualities and quantities, as is the case in Indian tridosha [21] and Chinese yin-yang [22] medical theories. Or, hot-cold may be combined analogically rather than organically with other symbolic dimensions, with e.g. male-female in Amazonian thought [23], bitter-sweet in British Guinea [24] or

strength-weakness, as in some Mexican groups [14]. At times, one label of the hot-cold dichotomy may itself be replaced by one of its analogical counterparts, as with "strong" or "irritating" which serve as functional equivalents of "hot" in some parts of Mesoamerica [2].

Internal structures of hot-cold principles are also variable and belie the notion of a simple binary opposition. Most include a neutral term. Items are hot, cold, or balanced. The number and precision of internal hot-cold divisions and gradients also vary. Items may be very hot or very cold, hot or cold, warm or cool, or temperate as in some Latin American examples [25], or hot-cold (and wet-dry) to particular (1-4) degrees as in Arabic and Renaissance standardized pharmacopeias [20]. Some folk cultures combine popular and "official" gradients, e.g. Pakistani Moslems [26].

Hot-cold reasoning and symbolism also crosscut diet, medicine, humoral and more general cosmological thought in many different ways. As noted above, some cultures have cosmological hot-cold concepts, but these do not particularly touch on the classifications of foods, medicines, and concepts of human pathology. For example African Zulus have a notion of humors, in which too much bile is blamed for a number of complaints, but this is distinct from their notions of human illness states and medicinal classifications which have, among others, a hot-cold dimension [16]. By contrast, Indian cultures have concepts of hot-cold imbalance leading to humoral pathology, which links foods, medicines and other more general life ways, morality and social life. From the medical point of view, it is extremely important to analyze what different domains are linked to health and illness through the common hot-cold idiom, in order to see how these are interpreted and manipulated to promote health. Hot-cold principles vary in the degree to which they pervade other aspects of culture. For every cultural case, particularly where the objective is to understand the indigenous medical system for the purpose of easing the introduction of modern "Western" medicine, it is important to note the situations in which hot-cold information is considered valuable and necessary; the contexts in which hot-cold considerations regulate behavior, the degree of agreement, the rigor with which information is followed, and the awareness and use of competing explanations in diet and illness which affect use of hot-cold explanations. Sources of authority and standards of practice (ad hoc or consultation with experts) vary across and within cultures. Unani (Greco-Arabic) and Ayurvedic (Indian) adherents have available to them folk specialists and "doctors" who may supplement local folk knowledge about humoral qualities [26, 27]—an alternative not available to those in Latin American folk cultures where no "official" hot-cold humoral system persists.

THE MITLA CASE STUDY

We turn now to an ethnographic example for the purpose of illustrating these features of hot-cold classifications for one culture, and contrasting it with others. The setting is Mitla, Oaxaca, a Valley Zapotec Indian town, population approximately 4600 located

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(1)	<u>naNla du^v</u>	<u>naNla</u>	<u>naJa?</u>	<u>templad</u>	<u>nyel yuh</u>	<u>Nahl</u>	<u>Nahl du^v</u>
(2)	<u>muy caliente</u>	<u>caliente</u>	<u>caliente</u>	<u>templado</u>	<u>fresco</u>	<u>muy fresco</u>	<u>frío</u> <u>muy frío</u>
(3)	"very hot"	"hot"	"warm"	"temperate"	"cool"	"very cool"	"cold" "very cold"

Fig. 1. Hot-cold terms: Line (1) Zapotec, line (2) Spanish and line (3) English.

in the southern highlands of Mexico. Data were gathered in an ethnobotanical and ethnomedical study, conducted over 14 months intermittently in the years 1971–1975. Over 90 individuals of all ages and both sexes were interviewed in the course of field and home interviews about hot-cold knowledge, beliefs, and practices to evaluate how individuals learn to use hot-cold information and reason with hot-cold principles. The population, who are mainly bilinguals, speak Zapotec as a first language and later learn Spanish. Subsistence *milpa* (maize, beans and squash) farming engages at least half of the population during the summer rainy season, but almost all men, women and children also participate in some aspect of the tourist textile industry. People sew, weave, and tie macramé in home craft production and/or retail or wholesale goods in Mitla, Tlacolula (the district capital, 20 min by bus), Oaxaca City (the state capital, 1 hr by bus), or in more distant parts of Mexico.

Mitlenos are linked to the outside world not only through their commercial dealings, but also through the mass media, government education, and social service programs. Children learn about health and nutrition through instruction in the public schools; adults get additional information through public nurses and social workers. Private physicians and government medical programs, which have reduced mortality and morbidity among the local population, have also made Mitlenos aware of modern ideas and conveniences, particularly in the areas of health, sanitation, and nutrition. Local midwives have largely been replaced by government licensed personnel, but local curers, mainly women, continue to treat traditional "folk" ailments such as magical fright, evil eye, and witchcraft [25].

* Zapotec has two words for heat or warmth. *naja?* and *nanLa*. One ordinarily says that herbs and body states are warm (*naja?*) in the sense of causing the body to warm, intrinsic warmth, or in the sense that the fire is warm, but hot when there is something "out there" producing heat, like the sun or air. One labels herbs or body states as hot, either as a bit of information distinguishing hot from "tepid" or as a synonym for warm as a bit of information distinguishing warm from cool. In the latter case the use of *nanLa* is a bit unexpected, but it is not incorrect. Overlap in these categories might be a result of the bilingualism in Mitla in which Zapotecs are used to responding *caliente* (hot) in Spanish for all things which in Zapotec are labelled either hot or warm *naja?*. *Nyel yuh*, cool is the most frequently used Zapotec term on the cold side of the continuum. It has a Spanish equivalent, *fresco*.

HOT-COLD CLASSIFICATIONS IN MITLA

In many respects, Mitlenos' use of hot-cold terms is typical of Latin American usage. Like any other people, they use the terms hot and cold to describe physiological sensations within the body, sensations of heat and cold from the environment, the warmth of the fire, coolness of rain, and emotional states, but also use the hot-cold dimension to describe the intrinsic quality of body states, foods, and medicines. They conceive of health as a balanced condition of hot and cold elements, the proportions of which are governed by intrinsic (inherited) body state, age, external environmental factors, activities, and the hot-cold qualities of ingestibles. All foods and medicines can be classified as to their intrinsic hot-cold quality. By means of these qualities, they are believed to affect the individual human condition. As in other Latin American systems the hot-cold continuum is divided into qualitatively, not quantitatively standardized dimensions, in this case seven. Mitla Zapotec has terms for "very hot", "warm", "temperate", "cool", "cold" and "very cold". Spanish equivalents parallel but do not exactly replicate the Zapotec (Fig. 1).^{*} The "cool" dimension can take into consideration moisture, though an opposing "dry" component is absent. Guided by the principle of opposites, people avoid extremes of exposure and balance "hot" with "cold" and "cold" with "hot" to achieve a more or less "temperate" healthy body state.

Beyond these shared features of structure and use, people vary in their evaluations of the actual qualities of things according to their different inherited knowledge, and different routes for classifying items as hot or cold. There are neither written traditions nor local authorities to establish standard classifications. Consultations with local folk practitioners are aimed at particular disease syndromes, like evil eye or witchcraft, not at evaluating the hot-cold qualities of symptoms. Though people informally consult kin, fictive kin, and neighbors for advice on treating common symptoms, the immediate guides are observation and experience, through which one reaches classifications of ailments and remedies for particular instances of illness. Unless stressed by illness or the vulnerability of age, anger, or physiological state (e.g. pregnancy) people pay very little attention to the hot-cold qualities of diet and activities.

Principles of classification

Hot-cold classifications have been viewed as stemming from the real physiological effects of particular items on the human body [8] or as essentially arbitrary.

trary [27]. In Mitla, as elsewhere, classifications are not uniformly consistent, but do conform to a general structure, which illustrates a combination of "traditional knowledge", based on the arbitrary authority of the past, patterns of symbolic information, observations of symptoms, and treatments which employ hot-cold principles in cause and effect medical reasoning.

By traditional consensus, a small number of foods and medicines are consistently classified as either on the hot or cold side of the continuum. *Yerba buena* (spearmint tea), *orégano*, and a number of other "sweet" smelling herbs are consistently classified as "warm", "hot", or "very hot". The classifications are continually reinforced by experience, as teas made from these herbs are commonly used to relieve cramps and flatulence described as "cold" stomach and are good for "cold" menstrual cramps as well. Thus, people learn to accept traditional herb and illness classifications not only by oral authority but by experience. On the cold side of the continuum, *limón* (citrus) is consistently classified as "very cold", "cold" or "cool". It is perceived to "cool" overheated bodies taken internally or applied externally (as part of a poultice to relieve inflammation), and to "cool" hot, spicy dishes. It is furthermore thought to cause cramps in persons suffering from "cold", e.g. menstruating women. In the center of the continuum, people agree that unprocessed staple grains, such as wheat and rice, are temperate, as is maize, the principal grain before it is treated with "hot" calcium hydroxide (for tortillas). People explain the classification by noting that these foods do not make one sick. There is also substantial agreement, based on tradition and experience that most green vegetables and herbs are "cool" while most chiles are "hot". Mescal (cactus liquor) is classified as "hot" while beer is "cold". Finally, there are a number of herbs used for testing ailments of known quality which are widely classified as opposite to them. Thus, most herbs used to treat "hot" inflammations are classified as cool, by tradition and therapeutic experience.

Though in general people refer to "tradition" and "inherited knowledge," in combination with empirical observation and experience to explain their classifications, there are also an additional set of considerations which guide or redundantly "explain" traditional classifications and usage: sensations, taste, color, location and effects. Certain items are perceived to "warm" the body and therefore classified as "hot", e.g. mescal and spearmint tea. Beer and soft drinks are "cool" or "cold" because they are felt to refresh the body. Herbal brews such as *espinosilla* which also "refresh" the body are similarly classified. These sensory classifications, however, are not simple renditions of thermal perceptions as many dishes which are served burning hot to the touch are cooling in quality, and switches prepared of a riverside herb, *chamizo*, which are used to strike a woman in the traditional sweat bath are classified as "cool" although they "burn like fire" (since the sweat bath operation is classified as refreshing). Taste is a second dimension inconsistently used to explain the classifications of foods and medicinal herbs. Spicy foods are generally classified as warming though these may be regulated by introduction of condiments of the opposite quality.

For example the heat of spicy dishes is tempered with lemon, classified as cool. Among medicinal herbs many common stomach remedies prepared from leaves of the mint family are classified as "sweet" and heating while "bitter" herbs are often cool. Classification according to taste, however, is subordinated to perceived physiological effects. Thus *cacahuaton*, nauseatingly bitter, used to clean out the afterbirth and restore normal function following childbirth is classified as very hot because it is believed to (re)heat the womb and arouses burning physiological sensations.

In classifying other items, color and growing location (moisture) are also sometimes used. This conforms to the usage in other Latin American cultures [28, 29]. According to some informants, the red: white dichotomy can be used as an analogy to assign hot: cold classification to e.g. red versus white castor bean leaves, pigweed leaves, and gripe pills. However, not all agree that this is a valid distinction, and certain plants which come in "red" and "white" varieties are all classified as of one quality—e.g. *epazote*. Growing locations, particularly moist locations, are also occasionally cited to justify hot-cold judgments. All herbs which grow in the rainy season are explained to be "cool" because they grow in the water, as are squash leaves and cultivated green vegetables. However, perceived effect on the human body will override these other hot-cold judgments.

Reasoning by the principle of opposites that cold foods or medicines aggravate a cold body state and hot foods relieve or do not harm a cold body, people juggle natural body signs, inherited knowledge and possible herb classifications to arrive at hot-cold evaluations for foods and medicines consistent with their personal experience and understanding of the principle of opposites. Given the rules by which classifications are constructed, people may logically arrive at different classifications for the same items, while sharing the general principles of classification.

The examples of meat, fat, and squash leaf classifications illustrate how such processes work. Traditional knowledge suggests that all meats (animals) come in hot-cold pairs. Commonly beef is opposed to pork, goat to sheep, and less consistently, chicken to turkey. Some people, however, reverse the terms of the analogy, and classify beef as hot, pork as cold, while maintaining the central idea that meats come in pairs of opposed qualities. Others claim that all meat is temperate until spiced and use the spices to arrive at the hot cold qualities of the meats (*cilantro*, used with beef, is cool; *orégano* with pork is hot). Others say they use the spices to "temper" the meats (so that they will not make them sick). People who claim that one or another meat makes them sick because of their hot-cold quality adjust their explanations to take into account their known body state and work from it back to the meat classification (see below).

Pork lard, the most common fat, provides a similar example. People who get indigestion from it classify lard to be of the same quality as their bodies, i.e. lard of the same quality intensifies their predominantly hot or cold imbalance. Alternatively, people can reason that pork and lard must be of opposite qualities, since pigmeat is temperate, but is then rendered into pork (hot) and fat (cold). Others reason that pork and fat must be of the same quality, either hot or cold

depending on one's inherited classification and whether or not it makes one's predominantly hot or cold body ill. Finally, one woman said that both must be temperate since "they do not make you sick". Again, effect on the body is the initial spur to further thought.

Squash leaves, predominantly classified as cool because they are moist and green, may be alternatively classified as "hot because they grow in the sun"; "hot because they grow in the hot season and they make you sick in the hot season"; and "hot because on a hot day they make you sick". Since the first person added that she initially judged squash leaves to be "hot because they make you sick" (she was suffering from hot anger) the most important dimension is provided by body signs—whether it makes one sick; ecological signs such as moisture and color only secondary considerations.

Critical for the classifications of foods, then, are the classification of body signs. Body state is affected by age, occupation status, as well as temporary factors such as climate, exposure, and disease. Children are generally classified as cool. They are, therefore, sensitive to cold foods, suffer from cold stomach complaints after eating them, and can be treated with hot medicinal herbs. However, they are not systematically excluded from protein or other nutritious foods on that basis. Cold foods, such as milk, are systematically spiced with hot cinnamon, to prevent harm, rather than eliminated from the diet. Adults are warmer than children, closer to temperate, but depending on their activities either predominantly hot (e.g. from farming in the sun; making tortillas or chocolate day-after-day by the hot coals) or cold (e.g. from daily weaving, sewing, or crocheting in the cool shade). Old people are judged to be either hot or cold depending on the accumulated effects of their occupations,* and they adjust their diets to avoid imbalance accordingly.

Body states are also influenced by weather, time of day, illness factors, and interactions between the three. During the hot (temperature) season, hot (intrinsic quality) foods are more likely to produce indigestion. Hot disease symptoms are likely to be more severe during the day; cold disease symptoms at night. Cool remedies applied to hot ailments are believed to be most effective early in the morning before the sun is up; hot remedies for cool ailments most effectively applied during the day.

Particular physiological states—pregnancy and lactation, both classified as hot—also disrupt the hot-cold equilibrium of the body. At such times, particularly cold foods, such as squash seeds and avocados cause illness under such conditions since they form too stark a contrast, while cool ("refreshing") herbs, such as *espinosilla*, are drunk to relieve sensations of heat.

Illnesses also have their hot-cold dimension, though most often hot-cold quality is the instrumen-

tal rather than efficient cause of symptoms. Too much hot or cold food is the efficient cause of many stomach complaints resulting in hot-cold imbalance—the instrumental cause of suffering—to be offset by herbs or regimes of the opposite quality. Hot stomach ailments include *bilis* (aroused bile) and bloody (red) dysentery. Each is treated by a combination of cool diet and medicines. Cold stomach illnesses include green (white) dysentery, *frialdad* (cold stomach, pain and flatulence), and *empacho* (surfeit). These diseases, diagnosed as sets of patterned symptoms of indigestion and intestinal malfunction are met by hot herbs and pills and avoidance of cold foods and beverages. People may also diagnose aches and pains as hot or cold depending on which side of the body the ailment is located (hot:cold::right:left), though, this analogy, like the color analogies cited above, is not uniformly respected. Folk illnesses such as "fright", witchcraft, evil eye' *muina* (anger), and *congrera* (infection from a corpse) are also hot conditions which are met with cool remedies.

Since it is possible to begin from different starting points (what one believes to be the initial body quality) and to use different routes to a hot-cold designation people reach different conclusions about the hot-cold qualities of particular foods, medicines, and temporary body states. For example, all people agree that *chapiche* (a spice eaten with beans and squash leaves), is very hard to digest ("it comes up again"; "it does not go down well") but those who work in the sun classify it as very hot, while those who work in the shade classify it as very cold. People reach opposite conclusions though employing the same principles of hot-cold reasoning. Any item which makes one ill must be an extreme grade of that quality to which the body is already prone to imbalance.

In general, Mitla and other Latin American classifications can be seen to differ from Ayurvedic, Chinese, and other hot-cold systems in several ways. First, in contrast to Indian and Chinese classifications, foods do not break down in to neat, general categories, for which hot-cold coding is redundant information. For example, in present-day Chinese folk cultures, hot-spicy, greasy dishes are in general hot; bland, often starchy dishes, cold. Foods are also affected by the modes of processing, the more elaborate the processing, the hotter the dish [30]. Among Indians, hot, spicy greasy dishes are hot; bland, unprocessed as well as pure milk product dishes, cool. Since in Mitla dishes the qualities of the basic ingredients vary, and are furthermore tempered by condiments, there are no analogous systematic distinctions to be made. Mitlenos also differ in this respect from other Latin American cultures, some of which include processing as a principle factor in evaluating hot-cold quality [4], others of which systematically classify many high protein foods as hot, other low protein foods as cool or temperate [31]. This may relate to the fact that there are numbers of illnesses of each quality (diarrhea and dysentery come in hot and cold species), in contrast to reports from these areas of Mexico and Guatemala [31, 32] where most common ailments are reported to be cold.

Second, among Latin American cultures, there is no additional cultural component for acceptance or

* Traditional occupations, such as farming, household maize grinding, and chocolate making, produced predominantly hot bodies. New occupations, such as weaving and sewing, performed in the shade, produce predominantly cold. The ideal occupational strategy for health (hot-cold balance) is a combination of activities (e.g. agriculture and weaving) which maintain a balance of hot and cold.

avoidance of foods of one or another quality. The hot-cold idiom is not all pervasive. For example, in Indian culture, the idiom hot-cold is integrally bound up with ideas of ritual pollution, social status, and semen-blood formation. The movement from hot to cold also corresponds to a movement from a polluted to unpolluted ritual state [12]. Indian Brahmins systematically pursue a cool diet, since it is non-polluting; peasant and those of low status (caste) generally consume more highly processed, hot, particularly fried foods. Conserving strength in the form of semen is also promoted by consumption of a cold diet. No such general rules for behavior—the practice of using food to create physical and social well being and relative status—exists among Latin American peasant groups.

Nevertheless, all these cultures do share the general principle of evaluating new items by their effects, and furthermore tolerate intracultural variability within local cultures and between local cultures within culture areas. For example, a large general survey of Indian cultures found that there were great differences between the north and the south, and no basic principle underlying local beliefs [33], and smaller surveys and nutrition project reports have shown that even Indian cultures, with their pervasive hot-cold idiom, vary in the exact designation they give to individual items and evaluate new foods in the same ad hoc manner of Mitla. C.A.R.E.'s Project Poshak found that their infant weaning food was accepted or rejected by its circumstantial effects [34]. People classified the new food as hot if children contracted conjunctivitis, cold if they suffered respiratory infections, either hot or cold (in conjunction with other facts) if they suffered digestive disorders, or neutral if they found it harmless. Investigators in the Tamil Nadu nutrition surveys found not uniform but substantial agreement on many traditional items, but less consistency on new food items [35] perhaps due to variable interpretations of their effects. Two nutritionists in Pakistan, who recorded variations in hot-cold, wet-dry, heavy-light classifications in graded sets (most agreement to least agreement) noted that official (hakim) curer classifications differed from those of the common people, but concluded that people were again judging items by their effects [26], at least in the case of hot season avoidances of hot foods. Obviously the degree of agreement people have about hot-cold categories, and the degree to which they conform to rules for hot-cold doctoring or illness prophylactics will affect the importance of hot-cold reasoning in their individual and collective health behaviors. As Taylor [33] has noted, medical personnel must take into consideration the local customs (and the degree of variations in these) if they are to use hot-cold information to introduce more acceptable health and nutrition programs.

PRACTICAL IMPLICATIONS

Ideally in any of these societies, the hot-cold idiom is a guide to behavior, to diet, and to medication. To avoid hot-cold imbalance, people try to be moderate in their social relations, careful in exertions, and attentive to hot-cold classifications in choosing foods and medicines. Hot-cold may have nutritional, phar-

maceutical and other socio-cultural consequences, depending on the consistency and regularity with which it is used among community members. If there is division of knowledge and use within societies, it is of both practical and theoretical interest to analyze how such variation in hot-cold food and medicinal classifications, and extension to non-nutritional, or medical domains works.

Learning the hot-cold system in Mitla

Learning to classify within the hot-cold system is a product of both exposure and interest. Interviews with young persons under the age of 12 revealed that though the youngsters had heard some items classified as hot and others as cold they could not articulate the principles for classifying new items, nor could they explain how the hot-cold system for balancing diets and remedying illness works. Though each of the youngsters was the child of an older informant who could explain the hot-cold principles of classification and categorize most items, the children only knew ideosyncratic categorizations and had not yet mastered the system.

Among older informants, there was greater knowledge about the qualities of individual herbs and foods, but very variable use of the system. Ordinarily, people pay little attention to hot-cold classifications. They eat foods they like, as they are available, without thinking about the hot-cold implications. Though many meals prepared according to local tastes are hot-cold balanced, there is little conscious concern for hot-cold balancing except when household members suffer from indigestion or other illnesses.

It is in the process of treating and preventing illness that most people, in fact, learn to integrate hot-cold information into a "system". Young motherhood is the time when most women synthesize this knowledge. Though they may have been exposed to bits of information previously, women learn to act on illness and medicinal information in the process of discovering what harms and heals their families. For example, a young mother, daughter of two middle aged adults who could articulate the hot-cold qualities of most foods and medicines, admitted that she had heard her parents discuss hot-cold qualities of illnesses and herbs but had paid little attention. The information was hearsay; some of it was remembered, some of it discarded as irrelevant to her life while she resided in her parents' household. With three young children, however, the information took on new importance. Observing the patterned illnesses of the toddlers, she noted that every incidence of diarrhea followed their eating certain foods, each of which was cold. Thin black beans, Coca Cola, and grapes were the usual precursors to diarrhea in the children's diets, while avocados in her diet produced diarrhea in her nursing infant. Putting together what her mother had taught her, namely that children are cool and the cold foods make them ill, with her knowledge of the cold classifications of each of these foods, she concluded that the hot-cold system could be used to explain her children's ailments, and prevent illnesses in the future. She used the fact that hot teas of *yerba buena* and *orégano* relieved the stomach problems as additional confirmation that her hot-cold interpretations were correct; these classifications of illness symptoms, remedies,

and the principle of opposites became part of her on-going medical knowledge. Though she had never paid attention to the hot-cold quality of their diet before, she became careful in preparing meals for the children, and she knew which herbs to use when they became sick. The hot-cold classification which she had heard and rejected as hearsay, became a guide for dietary planning and home medication.

Hot-cold information can also be learned and used to adjust diets and medications for persons beyond the tender, cool state of childhood. Sudden onsets of diarrhea are never regarded as random occurrences; instead an illness etiology which considers permanent and temporary hot-cold body state and the qualities of particular foods in the recent diet is constructed to find the cause of the imbalance. Diet and medicines of the opposite quality are then prescribed to redress the illness. Similarly, an elderly person of known body state, such as an old farmer hot from his many years toiling in the sun, can observe what foods make him sick (e.g. chocolate, chilis, pork—all of which are hot) and what foods are easily digestible (e.g. cooked vegetables classified as cool). Thus, he will conclude that cool foods are harmless in his condition and he can prevent digestive disorders by avoiding hot foods like chocolate.

Hot-cold categories can also be extended to the symptoms and possible remedies for other kinds of illnesses, including emotional and social disorder as well as physical states. *Muina*, "anger", leads to *bilis*, "aroused bile". Both are hot and are offset or prevented by cool herbs. Witchcraft, sorcery, and other forms of superhuman attack are also classified as hot and have their cool medicinal and dietary regimens. Aches and pains, as previously noted, can be classified as hot or cold depending on the symptoms, their origins, and locations. In each case, the particular illness can be fit into the more general scheme of things, and an explanation or remedy provided in hot-cold terms.

Hot-cold reasoning also provides the possibility of more comprehensive health-related behaviours, by integrating diet and medications into the health regime. For example, pinkeye, an infection striking children during the dry season, is classified as hot. Traditionally it is treated by cool remedies (eyewashes with rosewater and mesquite); and cool diet. Persistent cases which do not respond to treatment are "explained" with reference to the diet—the parent who provides medications for the eye has failed to observe what is going into the mouth—i.e. hot chilis.

Because there are many possible signs which can be used to reach the same or opposed conclusions about the hot-cold quality of an illness, and there are many possible herbs of either hot or cold quality good for many illnesses, people can try a number of different remedies and/or diagnosis until something is effective. Since people eventually recover from most illnesses, in almost every case they can rationalize that the hot-cold system "works".

Positive consequences

Hot-cold classifications give people a means for assessing each individual situation of illness and seeking a course of action within a traditional, comprehensive system. Even if they accept different traditional classifications for individual items or follow different paths to classification, they still share a basic set of rules for classification, and faith in a common system. The sense of "doing something", and of being able to analyze and explain illnesses in terms of a single system, contributes to a general sense of control and order in the universe, and is without doubt, of some psychological benefit in promoting health. This conforms to the observations of others, that the important fact is that everything can be classified, whether or not one shares the particular hot-cold designations for each food, medicine, and body state [4]. It is also important that all people know they are sharing the same system. In Mitla this means knowing different possible routes to classification and symbolic oppositions, but keeping the most important criterion to be observed physiological effects. Like other cultures, they share an underlying system but the particulars diverge from cultures both close to the Mitla vicinity [4] and more distant from it.

Aside from these psychological benefits, real nutritional or pharmaceutical effects are less easy to assess. Medical-pharmaceutical analyses of the particular illnesses and medicines classified in hot-cold terms have rarely been made, so it is not possible to draw any conclusions as to whether the hot-cold classifications in Mitla are chemically, as well as symbolically effective. Medicinal herbs, which are more consistently classified than common foods, can be of medical value. Medicinal teas of hot herbs, which put quantities of (boiled) herb water into victims of diarrhea are probably harmless, if not beneficial. According to pharmaceutical analyses as well as native customary knowledge certain cool bitter herbs, which are taken early in the morning to offset *bilis*, acid indigestion, and other symptoms of anger, have the physiological effect of stimulating appetite. The herb most often cited as good for *bilis*, *yerba maestra* (*Artemisia mexicana*) has been shown to be chemically an appetite stimulant, as well as vermifuge. Other examples of positive physiological effects of native medical procedures rationalized in hot-cold terms will probably be discovered in the future, but at the moment they are in the realm of speculation (see [18] for a similar argument).

The positive virtues of other dietary and medicinal practices in Mitla are equally speculative. Though Mitleños differ on their hot-cold classifications of many basic foods, including the staple plant foods, black beans and squash leaves, one could argue that attention to hot-cold dietary balancing and occasional medications assures a sufficient intake of micronutrients [36],* or that the health practices of "cooling off" before entering a cool room or eating after intense (hot) physical exertion or (hot) emotional involvement are beneficial. Similarly, the practice of avoiding hot foods when taking hot medicines may aid digestion, since these food restrictions consistently exclude chocolate, chili, picant (greasy) dishes, and mescal. But in Mitla, eating according to hot-cold rules to counteract illness will *not* result in a higher

* Arber [36] suggests that the major benefits of hot-cold and other medicinal herb classifications which promoted their use during the Medieval period in Western Europe was some contribution to micronutrient intake.

protein intake [32], regulation of uric acid [8, 32] or other beneficial physiological effects. Furthermore, sensible eating and food habits which fall under hot-cold rules in other cultures are common sense practice in Mitla. Whereas in Ecuador people boil day-old food because it is classified as cold and therefore harmful, and in the process kill toxic bacteria [37] and Yucatec Maya in Mexico avoid over exertion and electrolyte impletion by balancing their salt and water intakes through hot-cold rules [38], in Mitla, people boil leftover foods because otherwise they "decompose" and "make you sick", and they eat large quantities of salt when they ingest food after a period of overheating or exertion because otherwise the food "makes you sick". No further reference to the hot-cold level of explanation is made. They also use common sense in regulating their diets and avoiding certain foods. Squash seeds, avocados and pork fat are observed to produce diarrhea, particularly if followed by drinks of cold water. All the foods and the water are classified as cool, cold or very cold. Yet, informants laugh when presented with the question: "Do all the foods make you sick because they are 'cold'?" Their explanation: "These foods make you sick because they're so greasy!" Too much fat produces diarrhea. Along the same lines, eating sauces spiced with *orégano* day after day is said to produce indigestion. Is this because "all the foods are hot?" No, too much of any food will make you sick. And so their common sense rather than hot-cold explanations for health take precedence.

In summary, the major positive values of hot-cold food and medicinal reasoning are (1) the psychological-biological advantage of having a systematic guide to health and nutrition, and (2) variety *per se* in the diet and pharmacopeia. Traditional recipes, whether people refer to hot-cold terms or not, call for a number of different condiments while traditional herbs also introduce a variety of plant matter into the diet. Whether people alternate their menus and medicines for reasons of taste or for hot-cold balancing, the variety is potentially explicable in hot-cold terms.

Negative consequences

In contrast to many other cultures [1, 32], the hot-cold system in Mitla does not appear to have negative nutritional or medical consequences. Under ordinary conditions of health, hot-cold information is redundant. Staple grains are temperate, pulses and meats variable, and all can be altered by careful manipulation of condiments. Any potentially cold meal or beverage believed to be harmful to cold bodies can be tempered with hot *yerba buena* or *orégano*, added as condiment or taken as tea. Any potentially harmful hot meal can be cooled by lemons or limes.

Nor are hot-cold regulated diets for youngsters, pregnant and lactating women, or the ill, unduly restrictive. Infants are often kept from cold foods such as thin black beans and potatoes, but these restrictions are based more on observations that they have produced diarrhea, than arbitrary judgments that the foods are cold. Babies are allowed the soup of black beans and the broth in which potatoes are boiled, though not the "heavy" beans or potatoes themselves. There are basically no restrictions on the diets of

young people, other than foods which the youngsters themselves refuse to eat or foods which through observation have produced diarrhea in children in the past. Similarly, pregnant and lactating women avoid certain foods which make them sick, but are not denied even these, the effects of which can be tempered. Only the ill have items systematically excluded, and then are those which are hard to digest (cooked greens—cooling—are prescribed). Even the proscription on eating lemons which is very cold when suffering from a cold condition such as menstrual cramps is not harmful, since other fruits (like oranges) are classified as hot.

Nor do Mitleños ordinarily deprive themselves of modern medical care and effective medical regimes because of their hot-cold beliefs. Although some individuals refuse to take modern medicines when they believe the medicines are hot and their conditions are hot, the usual procedure is to take the medicine, and then treat the hot-cold aspect of the illness by a medicinal tea of the appropriate quality. A medicine for an ailment believed to be cold can be taken safely with *yerba buena* tea, no matter what its assumed quality. Terramycin cream (classified as hot because Terramycin pills which relieve cold stomach are hot), which is used to relieve pinkeye, can be safely applied with rosewater which is cool, if one wants to preserve hot-cold consistency. Alternatively, people reason that Terramycin cream is strong and effective, irregardless of its hot-cold quality. Thus, hot-cold beliefs and practices have been synthesized with modern medicine to either (1) produce hot-cold designations for new medicines opposite in quality to the conditions they successfully treat, or (2) use modern medicines apart from the hot-cold system; and then use hot-cold teas alongside them. The people, rather than modern physicians, have performed the syntheses to minimize conflict.

New foods have been accepted without much problem. Bread, and other processed wheat products, are generally classified as temperate, unless a particular spice or fat makes them predominantly hot or cold or they produce ill effects. Infant weaning foods, particularly gruels, are also generally classified as temperate (if they are harmless), or can be offset by spicing. But more significant, the hot-cold quality of the food is not considered at all unless it makes the child sick. New foods are avoided only if observed to make children sick.

Mitleños also have been able to syncretize new disease categories in their traditional idiom, in order to better enjoy the advantages of traditional and modern medicines. Diabetes is a modern ailment, diagnosed by the doctor. The symptoms he labels diabetes include social irritability, emotional outbursts, indigestion, weakness and thirst. In the local idiom, these symptoms are labelled *muina* (anger), *bilis* (aroused bile) and *susto* (fright), classified as hot, and treated with cool remedies. Because the doctor suggests the onset of diabetes as due to some intense emotional experience or aggravation, and he treats the symptom of thirst, people reason diabetes must be hot as well. They use the traditional bitter cool herbs used to treat *bilis* to relieve the thirst of diabetes, and so extend their traditional herbal remedies, as well as hot-cold reasoning to the modern disease.

New nutritional information

Less easy to syncretize are new nutritional categories. Mitleños talk about vague new food classifications in terms of *puro vitaminas* or *puro alimento* but are not sure what these mean. *Vitaminas* and *alimento* are a positive value which some foods such as yellow maize, tomatoes, and potato skins are reported to have, while others do not. They are not equivalent to temperate, though many of the foods are also classified as temperate, but are outside of the hot-cold classification. Foods which are *puro vitaminas* or *puro alimento* are "good for the health", harmless if not beneficial, while the categories can also be taken in the purified form of injections, pills, and tonics. When recovering from a local ailment of believed superhuman origins, such as witchcraft, "fright", or evil eye, people often go to the doctor for vitamin shots "to build up the body" once their spirit-based life is restored by traditional curers.

Vitamin and other new food categories can either supplement or replace traditional hot-cold food categories. In Mitla, at present, they are used in parallel fashion, both for classification and as guides for nutrition. As mentioned above, staple grains, such as maize, wheat (bread), and rice are all classified as temperate and *puro alimento*. They are thought to be "good for you"; they do not make you ill, they fill you up, and they make you fat. The additional classification does not change existing eating habits. Vitamin-rich vegetables, like carrots, are eaten with greater gusto by people who have been told they are "good for the eyes". People have also been told that other vegetables, including potatoes, have lots of *vitaminas* and cite this information as a reason to eat them (though they eat them as they are available in the market and as their budgets dictate). People do not distinguish between one vitamin and the next, but accept the general idea that foods which have *vitaminas* are good for certain ailments because of their vitamin quality.

Unfortunately, vitamin information is not being systematically learned or used by the population, who cite vitamin quality as an added feature of foods which are good for you, after observing their effects. Modern nutritional, like traditional hot-cold information is sought only under conditions of stress. Under ordinary health circumstances, people eat according to taste and tradition as well as budget considerations, and pay no attention to vitamin qualities. They do not alter their diet or seek vitamin supplements unless they are ill. Nor do they change their eating preferences to conform to modern dietary information. For example, through school and social education programs, government nutrition workers have informed people about the superior vitamin quality of yellow over white maize, but people continue to eat white maize for reasons of taste, texture and color preference. Thus, vitamin information has little practical effect under ordinary conditions of health. Far from interfering with traditional hot-cold knowledge, it fulfills a role parallel to hot-cold coding in structuring thought and behavior.

ADAPTATION AND CHANGE

More complex diet and greater use of modern

medicine present increasing quantities of information as well as alternative classification principles for food and medicine. Yet, in spite of new processed and packaged foods, "new" diseases and pharmaceuticals, and the traditionally variable use of the hot-cold principle in managing health, hot-cold reasoning persists for several reasons.

First, classifications of the most common illnesses and remedies are more consistent than those for food. The most common ailments are various forms of stomach aches. Sixty percent of the traditional medicinal herbs treat some form of stomach distress [25] and these are consistently classified and treated by herbs and pharmaceuticals of the opposite quality. The illnesses have not changed. Traditional herbal remedies still exist; and the addition of non-herbal patent and prescription medicines has resulted in the extension rather than the rejection of the hot-cold classification. Alka Seltzer, which relieves the same cold symptoms, as *yerba buena* is also hot (and besides, it visibly "boils").

People have also been able to extend certain dimensions of hot-cold classification, such as color, to pills. Much as white castor bean leaves are cool while red castor bean leaves are hot, people select red gripe pills to cure cold ailments and white gripe pills to cure hot ailments. They try to type the hot-cold quality of their respiratory distress, and then use the color principle as a guide in selecting between otherwise similar pills. As in other situations of trial and error dosing with herbs, if one pill does not work, they can try the other, and then reanalyze the symptoms of their illness in hot-cold terms.

Also, people find it convenient to translate the information they receive from the doctor into hot-cold terms without conflict. In case histories, people refer to hot-cold. One old man, told by the doctor that he was ill because of so much hard work he has passed in the sun, was prescribed a diet which emphasized green herbs and restricted chocolate, spicy foods, and mescal. The patient concluded that the doctor understood his illness was hot so had prescribed a diet of cool foods with hot restrictions. When the doctor's pills made him ill, he further classified these as hot.

DISCUSSION

Mitla and other Latin American peasant cultures using hot-cold idioms in nutrition and medicine share with those of the rest of the world the general belief that all goods, medicines, and body states can be classified and interrelated; that illness can and should be treated by a combination of diet and medicating, and a general theory of health which analyzes the state of the human organism in his total environment. The last is an extremely important point of medical theory, since intrinsic to hot-cold diagnoses and treatment is the analysis of the individual case history, an art which was perfected by the medieval Arabic physicians, elaborating their own methods on top of Greek hippocratic theory, passed on to them through Galen [39]. Ideally in all of these cultures, hot-cold also provides a design for living—i.e. health—though as indicated, in Latin American cultures, the design is loosely followed, and attention to the hot-cold idiom

under conditions other than illness is not standard practice.

Beyond these general medical observations, however, hot-cold theory and usage in Latin America diverges from that of other areas. First, Latin American peasants refer almost exclusively to hot-cold to "explain" various body, particularly gastrointestinal, ailments and the effective qualities of foods. By contrast, wet-dry, light-heavy and more composite values (such as yin-yang) enter into the considerations of other cultures. For example, Indians using Ayurvedic tradition also regularly consider the quality gas producing (or not), strengthening (or not), easy to digest (hard to digest) corresponding to heavy (light). Technically, they could consider whether particular foods are good for buiding the three doshas, one of the seven organs, though in practice this usually comes down to hot-cold classifications within the folk cultures, a "reducing" phenomenon noted as well among the folk Chinese [21,30]. Second, the actions people take in regard to hot-cold classifications also vary significantly. Those subscribing to the Unani (Greco-Arabic) and Ayurvedic (Indian) systems consistently avoid hot or cold foods during their respective hot or cold seasons. This practice contrasts with that of Mitla (and other Latin American peasant systems) where it is noted that hot foods have more of a tendency to make one ill in the hot season, but are not for that reason systematically excluded from the diet. Filipinos and Sri Lankans regularly manipulate their hot-cold qualities by bathing [1,21], a practice only informally followed in Mitla. Such are important differences to consider when developing food and health programs.

Different cultures, culture areas, as well as individuals also differ on the rigor with which they adhere to hot-cold classifications. In Mitla, as in other Latin American cultures, most people refer to the categories only under stress, if then. The most rigorous adherence to hot-cold qualities of foods, personal habits, and medicines occurs where hot-cold symbolism is tightly integrated into the rest of culture so that the individual finds himself creating himself, his society, and his cosmos by his observance, destroying those entities by his refusal. Indigenous New World cultures provide good examples [15,23,24,40]. Modern Indian cultures, which create social structure and cultural statuses through food, also pay greater attention to hot-cold (among humoral qualities) than Mitleños. In particular, they observe food avoidances for pregnant and lactating women, infants and children, and for particular illnesses based on hot-cold qualities. They contrast in both theory (the kinds and numbers of avoidances) and practice (the rigor with which avoidances observed) with the more *ad hoc* approach to hot-cold food rules in Latin American peasant cultures. West Pakistani Moslems show a similar adherence to humoral (Unani) food rules. In one study, the author found 96% of 401 respondents practiced some aspect of Unani medicine (food rules) in their homes, in spite of the presence of modern medical care for almost all groups, and 19% who said that they did not believe [26].

Obviously the degree of agreement as to which foods are hot and which cold present an added dimension to analysis of cultural practices. Though a

few authors have suggested that if informants were to sit and reason together they would sooner or later arrive at the hot-cold designations [6] most ethnographers agree that there are substantial variations within cultures; and that these can be discussed if not measured.

Finally, hot-cold systems differ with respect to their pervasiveness in medicine and culture. As Glick [41] and Suárez [42] have noted, illness causation and its relationship to socio-cultural context should be analyzed at three levels: efficient cause (the agent immediately responsible), instrumental cause (how the illness came about) and ultimate cause (why the agent acted as it did). Suárez used this scheme to analyze illness etiology among the Morrerros of the Venezuelan Andes, where she found that cold could be an instrumental cause if associated with hunger (efficient cause), or an instrumental and ultimate cause for certain cold diseases, where external cold penetrated the body and upset the thermal balance, due to some other efficient cause, such as fright or draft. For example, in Mitla, hot-cold terms are used most frequently in situations of digestive upset. Analysis of past diet and symptoms indicates the instrumental cause (hot-cold imbalance), efficient cause (the ingestion of too much of some food of one quality, sometimes in combination with other environmental and social factors, such as anger, overheating), and the ultimate cause—the nature of hot-cold balance in the universe. Etiology of other illnesses include hot-cold imbalance as the one of a number of instrumental causes, e.g. the hot condition which results from fright (efficient cause) and soul loss (instrumental cause), with the patient's social relations and relationships with the superhuman providing ultimate explanation. Similar analyses could be performed and compared with more complete data from other cultures.

Another important dimension of comparison is whether cultures refer to hot-cold mainly or only in curing (i.e. after the fact evaluation of hot-cold imbalances and efforts to remedy the condition by the principle of opposites) or use hot-cold as a continual guide to conventional behavior. Among Indians, Chinese and in some other folk cultures, hot-cold provides a constant guide to diet and activity. Indians avoid imbalance through scrupulous adherence to dietary rules, many of which are phrased in hot-cold terms, Chinese ordinary and festival meal consumption is geared to the hot-cold (or the yin-yang) idiom. Amazonian natives are constantly assessing their activities and food intakes in hot-cold (analogously sexual classification) terms; Tewa Indians regulate all of their social and practical behaviors within the dictates of hot and cold seasons and hot and cold rules. In brief, cultures differ in the degree to which hot-cold is pervasive in their cultural thought; and therefore the numbers of situations in which hot-cold food (and medicinal) rules will be salient guides for behavior. For most Latin American peasant cultures, such as Mitla's, hot-cold is an idiom used for post-hoc diagnosis of illness and curing. In analyzing hot-cold as part of "medicine as a cultural system", the differences in the use of the hot-cold idiom in other domains of culture, idioms alternative to it, and the type of causal explanation for which hot-cold is used in illness etiology should be taken into account and interrelated.

PROSPECTS

How long hot-cold analysis and reasoning will continue in Mitla is an open question. Since hot-cold is not part of the intrinsic cultural symbolism, Mitleños would be losing an important part of their culture were they to discard hot-cold completely, but in contrast to e.g. the Desana or the Indians, not undermining the basic symbols of their larger cultural whole. Furthermore, given their post hoc evaluations, intracultural variation, and orientation toward "civilization" away from the "superstitious beliefs" of their past, one would expect hot-cold reasoning to be threatened were it to run contrary to people's prevailing logic, or desire for modern thought and conveniences.

Mitleños are extremely receptive to any new foods or medicines which they believe are good for them and judge their "goodness" by their effects. Whether hot-cold reasoning is rejected as increasing quantities of modern information are presented remains to be seen. So far, people have been open to syncretizing the two systems, translating new information into hot-cold terms or setting up parallel classifications, so they can treat modern illnesses and eat modern foods, and retain hot-cold qualities as a guide to illness and remedies.

Mitigating against the persistence of hot-cold classification are the large increments in new foods and medicinal information currently being introduced, some of which are not so easily accommodated within the hot-cold system. In spite of the syncretizing examples cited above, most young people see modern illnesses of unknown quality treated by the doctor, as responding to injections, pills, and tonics, also of unknown quality. As occupations and diet become more diversified, it becomes more difficult to evaluate the natural signs of body states and the particular elements which make one sick.

Hot-cold may also lose vitality in favor of more modern explanations of why particular foods cause harm. A woman who had mastered a government-sponsored course in infant nutrition proudly announced that she no longer believed in hot-cold reasoning. Though she had been taught by her mother that beans make babies sick because they are cold, she learned from the course that beans are difficult for children to digest only if they are served in their whole form. The same beans well mashed and strained produce no ill effect. On the basis of this prestigious new information, she was ready to scrap the traditional hot-cold system as simple-minded "beliefs" and "superstitions". Modern medical terminology and nutrition jargon also threaten the persistence of hot-cold reasoning through attrition. Younger people, educated and looking forward to modernization, pay more attention to modern medical jargon than the traditional wisdom of their elders. Yet, hot-cold persists in Mitla because it is still potentially useful. As long as people continue to suffer from ailments traditionally evaluated in hot-cold terms, and to cure themselves with herbs and pills classifiable in hot-cold terms, the idiom remains useful for describing human health experience. While aspects of health and nutrition which have traditionally been explained in hot-cold terms have been rejected or

ignored in favor of more modern, "scientific" explanations, hot-cold still provides a comprehensive principle for understanding everyday health and disease, and links human behavior, food, medicines, and the elements in the natural world.

For the nutrition worker or health planner, the hot-cold system in a town like Mitla does not pose the problems for health care delivery cited for communities in which people refuse to take medicines or nutritious foods if they run counter to their hot-cold health beliefs [43, 32]. It is not a potential source of malnutrition and/or specific vitamin deficiencies (e.g. as in the case of vitamin A deficiencies attributed to hot-cold food beliefs and avoidances in Java [44]. Neither do hot-cold food beliefs particularly affect acceptance of new foods, as has been suggested to be the case for a Quiché community in Guatemala [45]. Since hot-cold does not interfere with full utilization of local food resources or with most modern health improvement measures, there is no reason to consciously plan a health or nutrition program strategy in hot-cold terms. Given the variable classifications of many items, stemming from variable judgments about the initial states of human bodies, an acceptable strategy would be difficult to devise in any case. Modes of understanding modern medicines in hot-cold terms are best left to members of the local population, who are clever and capable of forging syntheses between tradition and modernization where they see explanatory need and fit.

Nevertheless, while health workers need not introduce new concepts and products in hot-cold terms to ensure their acceptance, they can be sensitive to the traditional health beliefs and practices of local populations for other reasons. Hot-cold classifications, as used in Mitla, if not health-promoting, are not usually health detracting, and need not be discouraged. A physician, with tact and attention, can discover if his patient has hot-cold beliefs about the nature of his particular case of illness which might interfere with taking medicines, and adjust his prescription in line with what the patient deems harmless. Thus, the individual cases where hot-cold might interfere with modern health care delivery can be discovered and dealt with. As a strictly positive consideration, traditional health concepts and practices can potentially provide modern medicine with new pharmaceuticals and better understandings of the biopsychosocial aspects of health [46]. They can also continue to provide health benefits and one route to maintaining cultural integrity for a culture rapidly undergoing change and a principle to integrate health and healing beliefs with the rest of culture.

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APPENDIX

SCIENTIFIC IDENTIFICATIONS OF HERBS CITED IN THE TEXT

Common name	Scientific name
<i>cacahuaton</i>	<i>Calea hypoleuca</i>
<i>cilantro</i>	<i>Coriandrum sativum</i>
<i>chamizo</i>	<i>Baccharis salicifolia</i>
<i>chapiche</i>	<i>Porophyllum taquetoides</i>
<i>epazote</i>	<i>Chenopodium ambrosioides</i>
<i>espinosilla</i>	<i>Loeselia mexicana</i>
<i>limón</i>	<i>Citrus limon</i>
<i>orégano</i>	<i>Origanum vulgare</i>
<i>yerba buena</i>	<i>Menthus</i> sp.

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COLONIALISM AND INTERNATIONAL HEALTH: A STUDY IN SOCIAL CHANGE IN GHANA

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Abstract—This paper examines the role of colonial rule and of international agencies in developing modern health care in Ghana. Our purpose is to discuss processes in Ghanaian society in a way that will be relevant for comparison to other non-Western countries. What factors in colonialism supported the evolution of modern health care? What health measures were implemented to make the Gold-Coast-now Ghana-hospitable to colonialism? What roles do international agencies play in the continuing evolution of modern health care?

THE COLONIAL EXPERIENCE

A colonial system binds a colony by political and economic ties that promote the interests of the dominant country. The relationship depends on the opportunities offered by the resources of the colony, and on the power to exploit these resources of the dominant society [1].

Ghana is formerly a British colony, but it is difficult to specify the exact beginning of its colonial experience. Historians claim that the first contact between Europeans and the people of the Gold Coast was by explorers searching lucrative trade arrangements in the fifteenth century [2]. The disease environment along the West Coast of Africa was found to be extremely dangerous for European explorers. Malaria and yellow fever were particularly feared. The Portuguese found the region so inhospitable that, having arrived in the Gold Coast in 1471, they vacated their post in 1595 when they were challenged by the Dutch [3]. The British formed the African Company of Merchants in 1750, part of whose policy was to find adequate means to control or eradicate epidemic diseases in the West Coast. They subsidized the company to the extent of £13,000 per annum, and displaced the Dutch in 1821 [4]. The death rate and morbidity figures were high. There were two British Governors at any one time so that one could be on sick leave. In 1899 Mary Kingsley wrote that the West Coast had a reputation for diseases [5].

In the middle of the 19th century the British Colonial Administration decided to build hospitals in commercial and administrative centers. The few postal agencies were given anti-malaria drugs to distribute to government clerical officers, and to sell cheaply to local people. British Medical Officers were posted to the region, and were to develop a Gold Coast Medical Department and Services. Clinics were located in cities and principal towns where colonists engaged in commercial and mining activities. This was the beginning of an urban-centered health service. Modern curative medicine was formally institutionalized in the Gold Coast with the building of hospitals and dispensaries. The Basel Mission and the Catholic Mission introduced medical missionaries in rural centers "to penetrate into the heart of Africa to convert pagans to Christianity" [6]. Their hospitals and clinics in rural

Ghana today bear testimony to their sympathy with the poor and the rural people.

The colonial administration's medical policy recognized the importance of preventive health work. Preventive health measures were mainly intended to improve the health environment of government officials. Separate housing was developed to protect the health of expatriates. Top government officials, merchants and officials of mining companies were given bungalows. Modern water supply and the sanitary disposal of sewerage were concentrated in a few places. Later on, supporting domestic, clerical and technical staff were also given medical coverage. They were medically screened and allowed to benefit from the new technology of modern medicine because they were carriers or possible carriers of infection. In other words, cultural isolation was found to be an ineffective preventive measure. It was gradually recognized that epidemic diseases could only be uprooted when the causative organism was located and neutralized. People, whether expatriates or locals, could not be isolated effectively in different localities.

Local people were recruited to start medical work, in nursing, dispensary, and laboratory. Kissieh, a former chief nursing officer, Ministry of Health, has noted that mission and colonial medical officers enlisted the help of male orderlies in 1878 "to bathe and to feed the sick, to dress wounds and to administer drugs to the local population under their medical supervision" [7]. The first British Colonial nursing sister arrived in the country at the same time.

The Colonial Health service did not have a smooth beginning. As with any new idea, initial opposition seemed to come from the indigeneous population. The traditional social structure and culture gave credence to social and spiritual theories of disease causation. The traditional cosmology seemed opposed to scientific conceptions of disease. Scientific explanation and experimentation in laboratories were not understood, and seemed irrelevant because immutable supernatural laws were known to cause illnesses. Traditional health practitioners monopolized the market for health care outside the family efforts at self-help.

In confronting the indigenous system, the British Colonial administrators devised a method to neutralize the influence of the healers. A campaign of

"enlightenment" was used to persuade city dwellers, the educated and other opinion leaders that traditional healers were insincere and ignorant. The healers were consistently discredited in the popular media. Fearing prosecution, many healers returned to rural areas to practice in secrecy. From the colonial administrator's point of view, the practice of traditional healing was not recognized. If a person worked for the government, a mining company or in a commercial enterprise, he was expected to seek medical aid from the health service. Government medical officers were the only authorized people to issue an authentic health certificate to a worker or an official when he was found ill and was unable to attend work.

In their own way the missionaries also added their voice to "downgrade" the practice of traditional medicine. Their followers were encouraged to shun the healers. It was against Christian dogma to seek medical help from traditional healing. The healers were known as "fetish healers", "magical Men" and "medicine men" who did not know the actual causes of diseases.

Traditional healing was not entirely destroyed during the colonial period, but its image was tarnished and its evolution into modernity was halted. In the post-colonial period nationalists have rediscovered the place of traditional medicine in the Ghanaian society [8]. I feel that it is important for interdisciplinary research teams to study traditional medicine. At present a center for the analysis of traditional herbs has been instituted and its work is to disentangle facts from beliefs about the efficacy of native herbs.

In a paradoxical way, in helping to fight diseases in the tropics, the modernization process introduced by the colonial administrators also helped to introduce new diseases and to spread infectious diseases quickly through the country. These were unintended social consequences of introducing social services. Because of an improved transportation system, it was much quicker and easier for people to move from place to place, and in many cases they carried their infections with them. Rural-urban migrants were effective agents in carrying diseases from place to place. The spread of epidemics was quicker than before. Hartwig and Patterson [9] noted that government policies and the people's responses to them often created conditions favorable to the spread of diseases. Drainage of land, the introduction of gutters and clearing sites for development projects created new niches for infectious organisms. Like much of the rest of the world, the Gold Coast experienced in 1918 a nationwide epidemic of influenza. It reached many parts of the country and the damage was quite extensive. Today many old people still remember "the influenza". Mark Delancey's essay on the German labor programme in Cameroon is another excellent illustration of this point [10]. He argues that European employers need workers on large-scale plantations and other labor-extensive projects, and therefore encourage large-scale population movements. The workers often live in squalor. Migration, and poor conditions in crowded cities contribute to the rapid spread of diseases. Sidney Kark and Guy Stuart also discuss the role of the returning migrants in carrying venereal diseases to the

rural areas. Syphilis in northern Ghana was known as the "Kumasi Sickness" [11].

Thus, in the early part of the 20th century the British Colonial Health administrators faced problems of how to control epidemic diseases, how to treat high fevers, how to prevent cross-infection, and how to immunize people against the deadly tropical diseases. In 1924 a medical complex was built in Accra to treat patients and to conduct research in tropical medicine. This was the Korle Bu hospital complex, which is now the national center for training doctors. A British Colonial Governor, Sir Gordon Guggisberg, initiated and built the hospital during his tenure of office.

The health statistics showed that in 1901, there were 1.9 million in the area that today is Ghana, in 1911 there were 2.1 million people. In 1921 the census recorded 2.5 million people, and by 1931 there were 3.5 million people. Death and disability rates among expatriate population improved after the discovery by Ross in 1898 of the mode of transmission of malaria. Though the statistics are poor, the accompanying table gives an insight into the death and disability rates in 1923-33 and 1933-34, among the expatriate population [12]. (See Table 1).

COLLABORATIVE WORK OF INTERNATIONAL AGENCIES

After the Second World War, it became increasingly clear that international health programmes should be intensified. New media of communication and travel had given rise to rapid exchange of people and information among many parts of the world. The international community could genuinely be described by the slogan, "one world". The creation of the World Health Organization acknowledged this fact. WHO held a conference in Ghana in 1954 at which experts discussed measures to be used in treating onchocerciasis [13]. The creation of the Volta Lake as a result of the country's industrialization programme had brought the disease to Ghana by creating a niche for the sand fly which acts as the vector of its transmission. Consequently research scientists directed their attention to the northern part of Ghana, to embark upon a mass eradication and treatment programme.

In the field of health education and population control, the Ford Foundation, Population Council and other multilateral agencies have given scholarships to train Ghanaian health personnel. In a paper entitled, "A philosophy of health work in the African region" [14] it was noted by WHO's Africa Regional Office that WHO spends some \$2 million annually in awarding fellowships for African students to study abroad. At the 22 World Health Assembly in 1970 a report was submitted by the Director General stating that in the African region "Malaria remains the most important public health problem affecting as it does more than half the children under three years of age and virtually the whole population over that age, directly causing 10 percent of the deaths of children under five years of age" [15].

The colonial heritage left an urban-oriented health care system in the Gold Coast. The hospitals and clinics were located in cities, and the system is oriented to curative medicine. Doctors, nurses and

Table 1. Death and invaliding rates among expatriates for 1923-24 and 1933-34

Occupations	Number of people	Deaths	Death rate per 1000	Invalids	Disability (invaliding) rates per 1000
1923-1924:					
Officials	994	10	10.1	32	32.2
Merchants	1425	11	7.7	25	17.5
Mining companies	527	2	3.8	28	53.1
Missionaries	97	1	10.3	2	20.6
Total	3043	24	7.9	87	28.6
1933-34:					
Officials	857	3	3.5	42	49.0
Merchants	1359	6	4.4	13	9.6
Mining companies	682	8	11.7*	22	32.1
Missionaries	247	1	4.0	5	20.2
Total	3145	18	5.7	82	26.1

Source: *The Gold Coast Hand Book*, pp. 141. Crown Agents, Government Publications, London, 1937.

* More mines were opened and the hazards of finding new mining areas accounted for the increase in death rate among miners in 1933-34 figures. The risk was great.

paramedical workers are primarily interested in curative practice. The few supporting services such as modern education, physical facilities (modern water supply, electricity and modern drainage system) are located in the cities and principal towns. With the exception of a few missionary hospitals and clinics, the rural areas are without modern health facilities. Most of the health professionals in the colonial civil service were expatriates; at the approach of independence a vacuum was created when many of them resigned.

THE NATIONALIST PERIOD

In 1957 the Gold Coast attained independence. The Nkrumah government inherited a good civil service administration, manpower and a foreign exchange reserve. With this background and a desire for ushering Ghana quickly into modern ways of life, Nkrumah's government decided to increase training for health workers, and the facilities for practice. Many health centers were built in this period (see Table 2).

In 1950, seven years before independence, there were 2800 students in the secondary schools. By 1964,

seven years after independence there were 28,100 students attending secondary schools. Many new schools and several colleges were built. The new universities were instituted, the University of Science and Technology, and the University of Cape Coast. The former was created initially to train middle calibre science and technology professionals. In 1964 the University of Science and Technology instituted, among others, the training of pharmacists and dispensary technicians. Also in 1964, the first medical school was opened at the facilities of the Korle Bu Hospital. It became part of the University of Ghana, Ghana's first university. Fifty medical students started their education at the University that year. Nursing training was intensified by building more colleges and by encouraging experienced Ghanaian nurses to study to become tutors and administrators by enrolling at the new Department of Post-Basic Nursing at the University of Ghana. In 1963 there were 904 doctors in the civil service. Out of this number 78% were registered Ghanaian doctors. There was one doctor to a population of 10,000 people (see Table 3).

However, in the immediate post colonial period the curative as contrasted with preventive emphasis was still maintained. It was prestigious for the nationalist government to build more hospitals and clinics. The Ghanaian doctors who inherited the colonial structure maintained the system. They were the new elite

Table 2. Health centers in operation in Ghana

Region	1957	1958	1959	1960	1961	1962	1963
Western	—	—	1	2	4	4	6
Central	—	1	1	2	2	2	2
Eastern	1	1	3	4	6	8	12
Volta	1	2	3	3	3	3	3
Ashanti	1	1	1	2	3	3	5
Brong Ahafo	2	2	2	4	4	7	7
Northern	3	3	3	3	3	4	4
Upper	2	2	2	2	2	2	2
Total	10	12	16	22	27	33	41

Source: See Ghana Government Publication. *The Health Services in Ghana*, p. 47. Ministry of Health, Accra, 1967.

Table 3. Medical and nursing personnel in government service

Personnel	1957	1958	1959	1960	1961	1962	1963
Doctors	330	342	346	586	726	879	904
Dentists	18	14	17	17	22	29	36
Midwives	616	691	789	900	1008	1104	1235
Nurses	800	986	1627	1848	2023	2191	2366
Pharmacists	312	311	326	298	329	342	355

Source: *Statistical Year Book*, p. 33. Central Bureau of Statistics, Accra, Ghana, 1963. Also see [8, p. 67].

Table 4. Percentage distribution of health expenditure

Type of service	1973/74	1974/75	1975/76
Preventive services	12.3	10.3	9.7
Curative services	77.1	76.3	75.9
Research activities	0.2	0.4	0.5
Administrative	10.4	13.0	13.9
Total	100.0	100.0	100.0

Source: Ghana Government, Ministry of Health. Health Planning Unit paper, 1977.

and stayed in the cities and the principal town where supporting facilities were available, including good schools for their children and an elitist urban life suited to the "new colonials." The disease map of the country showed the prevalence of communicable and preventable diseases. The death rate figures were being reduced in the urban areas but in the rural sector death among children and nursing mothers was still very high. Authorities attributed the high infant mortality to poor environmental sanitation, and to ignorance and superstition on the part of mothers.

Treating infectious diseases and others is a high priority in any developing country, but the tendency to emphasize curative medicine at the expense of public health is a serious fault (Health Plan Reprot, 1977). While only 23% of the population live in the urban areas, 76% of the doctors practice there [16]. The figures for other medical and paramedical personnel are similar.

On the part of the central government it is prestigious to build modern hospitals. Figures from the ministry of health show that in the seventies most money by far went into curative services (see Table 4). Preventive services is not fashionable. It is expensive to build a sanitary system with modern water supplies, adequate drainage and sewerage systems. Although, in the long run, when its effect is felt by lowering preventable diseases, it is economic to undertake the expense.

It is even a standard assumption in Ghana that government workers who are sent to the rural areas are being punished by administrators. The professionals have effective power because of their prestige, scarcity, and social contacts with political decision makers to determine where to work. The rural areas are populated by people who have little or no comparable power and are unable to get sufficient amenities to meet their health needs.

It is true that the urban population has been growing at a rapid pace and therefore logical to find that hospitals and their major health services concentrate in the urban areas. It is also reasonable to find that health professionals are attracted to urban areas because of the availability of supporting services and facilities.

The point we need to stress is that the limitation of resources strongly influences health planning. Modern health resources are expensive and often imported. Foreign exchange resources are scarce. If the present determinants for health planning continue in effect, then the urban-rural imbalance of the colonial structure will also remain.

LOCAL RESPONSES AND LOCAL ADAPTATION

For economic and practical reasons the colonial administrators developed modern health technology to protect their citizens against tropical diseases. Because the expatriate population was mainly located in the cities and large towns, an urban center health service was created. It would have been almost impossible to exploit the resources in the Gold Coast without taking measures to improve the health conditions in the country.

Research scientists, doctors and paramedical personnel from many countries were recruited by international agencies in the fight against tropical diseases. This work gave new experiences to young scientists and health practitioners. As appropriately pointed out by Taylor [17], the principal motivation was self interest, but not selfishness. The churches also joined in the fight against deadly diseases partly for altruistic reasons, and also because they wanted to convert local people to the Christian religion.

Today, health planners, University lecturers and students challenge the existing health structure. Many of them come from the rural areas and wish to bargain effectively for their people. In the Ghanaian society, success is measured by how effective a person is in redistributing economic resources to his native home.

International agencies again have played an important role in directing the attention of the nationalist government to the rural people. Family Planning ideas were introduced by an international agency, the Population Council. In 1970 the government outlined a national policy and asked local officials to coordinate activities in lowering the fertility rate. The majority of the people who have large families live in the rural areas. Also, in the rural areas the death rate among children is high. So from an ethical viewpoint family planning expresses the wish to improve the health needs of the rural folks [18]. The University of Ghana Medical School, in conjunction with the Ministry of Health, developed the Danfa Project to train medical students in rural health practices and research [19]. In collaboration with the School of Public Health, University of California, Los Angeles, the Ghana Medical School assumed a joint responsibility for the project. The Danfa Project contributed to research in rural health, it demonstrated the need for community health, for integration of family planning and health behaviour, it demonstrated the need to tackle health needs from an interdisciplinary perspective, it trained middle level health technicians and instituted a training scheme to train traditional birth attendants.

Since Danfa, the Ghana Government and the World Health Organization have carried out another community health project, in the Brong Ahafo region in Ghana. Its focus was to determine practical ways to reach rural communities with a comprehensive health scheme. The basic principle was to motivate local people in villages to share the responsibility in caring for their health and welfare. Health care must be accessible to the users and relevant to their needs. Also, it must integrate its activities with other developmental programmes. In a recent study, by IDS Health Group [20] this observation was made: "It is now accepted that in most countries of Africa, Asia,

and Latin America, the government health services have failed to meet the needs of the rural masses. For too many children, in particular, die of preventable illness" [21]. This is true in Ghana also, although there is little agreement over what should be done.

CONCLUSION

What is taking place in Ghana is a combination of several major factors. First, there is an increasing awareness among the population that health care facilities, public health, the building of physical infrastructures and the education of the people are interrelated determinants. Second, a perspective has been developed through modern education that the rulers are not just "governors" but are men and women who, being at the top of affairs, are expected to improve the health of the people. Modern education therefore has played an important role in helping to instigate the people to react to governmental health policies and programmes. Third, in the districts and regional centers, a vocal group of modern councillors have emerged. In the village, voluntary associations, mainly welfare and cooperative organizations, have sprung up to educate the people about their rights and obligations. The central government has accepted the role of developing a primary health care system for the country. It is through this system that the vast majority of the rural people can receive primary health care. The National Health Planning Unit is responsible for seeing to the implementation of rural medical coverage. "The unit has recommended the recruitment and training by the year 2000 of 22,000 community level primary health workers, who would be selected and supervised by village development committees and who would be involved in pregnancy management, first level medical care, environmental sanitation, health education and the mobilization of health related community projects" [22]. The success of its implementation is yet to be seen. It requires the availability of economic reserves, the use of intermediate technology, the retraining of professional health practitioners (in service education) and the decentralization of authority, so that at the village level the necessary feedback can be provided to monitor and to evaluate the system.

Health systems, we have noted, have broad ranging ties with people's cosmology, their philosophical outlook, with their socio-economic structure and, indeed, their entire way of life. In this study it is at least clear that colonialism and international agencies were change agents. They have contributed to the development of modern health care in Ghana. But as an unintended social consequence of change, the functional equilibrium of the society had been affected. It is up to the nationalist government to implement a health plan which fits into the overall societal networks. In tackling this challenge the government must recognize the changing needs of the people and the fact that in health care development there is an international interest and goodwill. Health care is a concern of many nations; for a multiple of reasons, it is through the control, treatment and eradication of many diseases that people in the tropical areas and the international community will be able to interact to mutual benefit. Ghana owes much to the inter-

national community for its contribution to international health, but in the final analysis any evolving health care system, if it is to be adequately implemented to reach villages, must be designed locally to suit local needs.

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PRIVATE HEALTH CARE PROVIDERS IN RURAL BANGLADESH

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Abstract—In rural Bangladesh, most of the population has little access to government health-care facilities. However, private health-care providers are present and active, and their social background and the main features of their medical practice are discussed. Their possible involvement in better childbirth hygiene and oral rehydration therapy is proposed.

INTRODUCTION

Health-care delivery in developing countries has been typically described in terms of insufficient medical and paramedical staff, unequal access to services, the immigration of personnel to jobs in other countries, and the concentration of manpower in the cities, leaving the rural population, which often represents more than 80% of the nation, without access to modern medical care.* Planners and health officials of developing countries tried to correct these problems by increasing the number of hospital beds and western-trained physicians and nurses, rather than by developing a network of village-based health workers. Several years ago, inspired by the examples of the People's Republic of China, Cuba, and the Socialist Republic of Vietnam, the World Health Organization (WHO) and several developing countries launched comprehensive programs, to implement the delivery of modern health-care services to the rural masses. Primary Health Care Workers, Village Health Workers, or Family Welfare Workers, are expected to deliver immunizations, oral rehydration, family planning, and health education, as well as basic curative treatment, after a period of training and under regular supervision.

The rural areas of developing countries are not a "health-care desert". They have their own system of health beliefs and customs and their own kinds of indigenous health practitioners. Landy stated [2]: "It has not been so long ago that anthropologists and other observers of the medical system of non-western societies referred to their healers as 'quacks', 'charlatans', 'magicians'... and similar epithets. These notions of healers in non-literate societies as practitioners of essentially false medicine were embedded in a view of such human groups as being riddled with irrational thinking and perception and an overpowering dependence on magic." Recently the indigenous healers in non-western societies have been the object of renewed attention. As their adaptation to the impact of western medicine has become better understood, their potential contribution to primary health-care has been reconsidered [3-6]. This interest was reflected in a resolution passed in Geneva at the 29th World Health Assembly (May 1976) and in the cre-

ation of the WHO Working Group on Traditional Medicine.

In Bangladesh, the government tries to bring medical facilities to villages through programs to train medical assistants for rural subcenters. This effort is likely to remain inadequate for a long period of time. The most often mentioned obstacles are: the large number of consumers (82 million in 1980); the difficulty of communications in rural areas, particularly during the monsoon; and the small number of health professionals and their ambivalence to rural posting, the low utilization of government health facilities by rural people, and their inadequate attention to the needs of women and infants [10].

Since Hunter's "Statistical Account of Bengal" [7] published in 1876, very few studies have reported on rural health-care providers in Bangladesh. This paper presents information on the private health care providers in rural Bangladesh, including their social background and the characteristics of their practice. The potential involvement of private health-delivery systems is suggested.

MATERIALS AND METHODS

One hundred and twenty-one of the 4350 administrative units of Bangladesh were randomly selected in 1976 by the WHO Bangladesh Smallpox Eradication Program for a natality and mortality survey. In 1976 and 1977 the same were used for several surveys on medical manpower and facilities in rural areas [8-10]. By adjusting data from the 1974 Census, the population of these was estimated to be 2,018,564 during the 1976-1977 period. 43 (36%) had institutions or facilities for medical care (32 belonged to the government, 8 to the Union Charitable System, and 3 to religious missions).

Medical epidemiologists interviewed council representatives and members of the public in each to obtain a comprehensive list of private health-care providers. A private health-care provider was defined as an individual who was perceived by the community to provide resources and assistance in illness, but was not employed by the government health services.

Health-care providers were divided into seven categories:

1. Allopathic practitioners with M.B., B.S. degrees or Medical Board Licenses.

* For a discussion of the ambiguity of the use of "modern medical care" see Charles Leslie [1, pp. 6-8].

Table 1. Distribution of health-care providers, by category

Category practitioner	Number	% of all private practitioners	Population to health provider ratio	Health provider to pop. ratio (per 100,000)
Qualified allopathic	57	2.6	35413	2.8
Unqualified allopathic	764	36.0	2642	37.8
Homeopath	482	22.7	4188	23.8
Ayurvedic or Unani	218	10.2	9259	10.7
Traditional midwife	274	12.9	7367	13.5
Spiritual healer	288	13.5	7009	14.2
Other	37	1.7	54556	1.8
Total	2120	100.0	952	105.02

2. Practitioners without medical degrees or licenses who used allopathic drugs, including antibiotics.

3. Practitioners using homeopathic medicine who were institutionally trained or self-taught.

4. Ayurvedic or Unani practitioners who were institutionally trained or self-taught.

5. Traditional midwives ("dais") who learn their craft by apprenticeship and personal experience.

6. Spiritual healers who do not use medicine but heal through ritual chanting, amulets and charms.

7. Others that do not fall into any of the above categories such as bone setters.

Each provider was interviewed by an epidemiologist who used a standardized questionnaire that had been tested in a pilot study. Emphasis was put on the confidential character of these interviews.

RESULTS

The sociology of private health-care providers in rural Bangladesh is as follows:

(a) by professional classification (Table 1): allopathic practitioners (qualified and unqualified) represented 38.7% of the total number of practitioners.

(b) by age: for the under 20, 20-39, 40-59 and more than 60 years old age groups, the distribution of private health care providers was found to be 0.6, 30.4, 49.6 and 19.4 respectively. No qualified allopathic practitioners were found among the under-20 year-olds.

(c) by sex: excluding traditional midwives, only 25 female (1.3%) health-care providers were found, reflecting probably the cultural restrictions of the purdah

system [12, 13], in a country where 90% of the population is Muslim.

(d) by level of education (Table 2): low levels of literacy were found among traditional midwives, and spiritual healers.

The characteristics of medical practice show that of the 2120 practitioners, 791 (35.9%) are fulltime workers having no other business or occupation, and the remaining practitioners are part time workers, having other sources of income. The average number of working hours in a day ranges from 3.6-7. The median value was found to be 5.35 hr day.

Practitioners were asked about the site of their practice. 254 (12%) practiced in fixed sites and 1523 (72%) by visits to the patients' homes. 343 (16%) utilized both fixed sites and home visits. 190 practitioners had a practice site in a market place, of which 119 were unqualified allopathic, 48 homeopaths, 12 qualified allopathic, 8 Ayurvedics and 3 spiritual healers.

Table 3 confirms the importance of allopathic and homeopathic medicine and reveals that 74% of the patients were seen at a clinic rather than at home by 28% of the total number of practitioners.

Diarrhea and pneumonia were chosen to indicate the usual fees charged by practitioners. Fees were divided into three services: (1) consultation fees, (2) cost of drugs supplied by the practitioner and (3) home visiting fees. The average charges made by each category of practitioner are shown in Table 4. This shows that, in general, the allopathic practitioners charged considerably more than others for the treatment of either disease. Among the three services, the allopathic drugs cost most. The homeopathic practi-

Table 2. Education level of health-care providers

Category of practitioner	Total	Secondary	High school and/or college	University	% of the categories
Qualified allopathic	57	41 (71)*	6 (11)	10 (18)	100
Unqualified allopathic	764	415 (54)	69 (9)	22 (3)	66
Homeopath	482	238 (50)	35 (7)	10 (2)	59
Ayurvedic or Unani	218	36 (16)	4 (2)	0	18
Traditional midwife	274	2 (1)	0	0	1
Spiritual healer	288	16 (5)	2 (1)	4 (2)	8
Other	37	1 (3)	0	0	3

* Percentage of the considered category.

Table 3. Professional activities of health-care providers

Category of practitioner	Average number of patients seen per week		Total number and percent of patients
	At the clinic	At the patient's home	
Qualified allopathic	51 (78)	14 (22)	65 (31%)
Unqualified allopathic	35 (67)	17 (33)	52 (25%)
Homeopath	41 (79)	11 (21)	52 (25%)
Ayurvedic or Unani	18 (75)	6 (25)	24 (10%)
Traditional midwife	1	1	2 (1%)
Spiritual healer	11 (65)	6 (35)	17 (8%)
Total	151 (74%)	55 (26%)	212

tioners appeared to be the least expensive way of providing medical care, while Ayurvedic, Unani, and spiritual healers charged a moderate amount. For allopathic and homeopathic practitioners, diarrhea was more expensive to treat than pneumonia; the reverse was true for the other categories of practitioners. It is interesting to note that spiritual healers also provided some "medicine" and charge money for it. The "medicines" were most likely to be amulets and charms.

The role of health-care providers in childbirth was found to be of particular interest in a country where population pressure is high, the growth rate estimated to be 2.7 and the neonatal mortality due to tetanus recently found to be 1.9 per 100 live births [14]. Because of the purdah system prevalent in rural areas, and because of the overwhelming percentage of males among health-care providers, it was assumed that their role in childbirth would be negligible. Table 5 shows that each individual midwife delivered almost three times more babies than any practitioner from another category. However, each category of practitioner was found to be involved in delivery probably with the help of a female assistant.

DISCUSSION

The role of individual categories of health-care providers in rural medical care

The allopathic system of medicine seemed to be the most popular in rural Bangladesh. Although the most expensive, it dominated medical care, a fact illustrated by the number of allopathic drug stores even in small localities.

This was confirmed by another survey [8] conducted in 27,000 randomly selected households in 1381 villages where 22,867 respondents were asked the following question: "The last time that a child of this house was so sick that he could not take food, whom did you consult first?" Seventeen percent of the people consulted a government doctor, 38% a private allopathic doctor, 13% a homeopath, 18% another type of practitioner and 14% did not consult anybody. Thus, an allopathic practitioner was consulted in 55% of the cases.

A review of 915 deaths which occurred in 121 localities provided information on the practitioners consulted in the month preceding the death. 10.8% of the people called on a government doctor, 26% a private

Table 4. Average fees for diarrhea and pneumonia charged by category of health-care provider

Category	Average fee (taka*) for diarrhea			Average fee (taka) for pneumonia		
	Clinic consult.	Home visit	Medicine	Clinic consult.	Home visit	Medicine
Qualified allopathic	7	10	47	4	5	31
Unqualified allopathic	3	5	45	2	3	27
Homeopath	3	3	9	2	2	6
Ayurvedic	4	3	16	3	3	20
Spiritual healer	3	2	7	3	2	5
Other	2	6	12	2	6	16

* At the time of the survey, the exchange rate for one U.S. \$ was 15 takas; GNP per capita, 100 U.S. \$ a year; rice (the staple diet) costs 3 takas per kilo and the daily wage was 10 takas for a labourer.

Table 5. Deliveries by category of health care provider

Category of practitioner	No. reported deliveries per practitioner per year
Qualified allopathic	13
Unqualified allopathic	10
Homeopath	13
Ayurvedic or Unani	16
Traditional midwife	37
Spiritual healer	11

allopathic doctor, 36.6% another type and 26.6% did not call on anybody.

Although less explicit, additional surveys conducted by WHO and UNICEF among adult females in 11,489 randomly selected households found that when the correspondent fell "so ill that she had to rest in bed" 10% of the respondents would consult a government doctor, 8% a non-government qualified allopathic, 50.6% an allopathic "quack" or other, while 22.4% did not consult anybody.

Projected health-care provider manpower in rural Bangladesh

From the survey sample it was possible to make rough projections of the health-care provider manpower for the whole of Bangladesh. According to the 1977 WHO Country Health Programming Working Document on "Present Resource Use" there were 392 medical doctors working in the Thana* Rural Health Centers. The total number of qualified allopathic doctors working in rural areas, both in the private and public sector could thus be estimated to be 2548, giving an estimated doctor-to-population ratio of 1:29,000. The ratio of qualified allopathic practitioners to unqualified allopathic practitioners, was 1:13. Excluding the qualified allopathic practitioners, a total of 77,670 health providers belonging to the remaining six categories provided medical care for the 76 million rural population in a ratio of 1:1000.

The most important limitation of these surveys results from relying on interviews rather than observation of practices. The epidemiologists had little opportunity to assess the accuracy of the information given to them. For example, fees might be underestimated because the interviewer was suspected of being a government agent who was assessing the practitioner's income.

The second limitation concerns the classification of practitioners. Although covering the spectrum of medical care in Bangladesh, the classification did not detect "mixed" practices. A list of the main drugs used (allopathic or other) by the practitioners would have been useful. One would like to know more about these practitioners; for example, their religion, their knowledge of the system they used and the way they were taught.

Potential role of health care providers in primary health care delivery

The surveys show clearly that private health care providers are very active in rural Bangladesh, particu-

larly the unqualified allopathic practitioners who attend more than 50% of illnesses. Living in the community and being generally respected, private health care providers are aware of local beliefs and customs. They are more accepted than the government physicians and health workers. Leslie wrote, "Peasant and tribal peoples as well as urban dwellers admire the technology of cosmopolitan medicine and are eager to adopt new medications. At the same time, the abrupt manners of most physicians and paramedical workers when they deal with rural and lower-class people were resented, and in communities where these specialists were outsiders, resistance to their authority usually expressed class conflict. In this situation, indigenous practitioners adopted whatever seemed useful and available to them from cosmopolitan medicine. Laymen consulted these eclectic practitioners of traditional and modern therapies, and only in emergencies risked the possible humiliation, the expense, and the other difficulties of gaining access to fully trained practitioners of cosmopolitan medicine" [1]. Because of their accessibility to rural people, private health care providers should be given opportunities to become involved in the implementation of government health programs. This is being done in India [4] with a plan to integrate more than 200,000 indigenous practitioners. Recently in Bangladesh, the Ministry of Health reserved 20% of the positions for training rural health workers for indigenous practitioners. Very few responded because they were not willing to give up a year of practice to attend. Training and supervision might be provided locally and integrated with the activities of these practitioners in an effort to improve their participation. Attempts to involve these people in primary health care have demonstrated the difficulties of such an enterprise [5, 6]. However, the results obtained in countries where it has been tried indicate that such an approach could represent a temporary alternative for the access of the people of Bangladesh to better health.

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* A thana is the administrative unit above the union.

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TOWARDS A POLITICAL ECONOMY OF HEALTH: A CRITICAL NOTE ON THE MEDICAL ANTHROPOLOGY OF THE MIDDLE EAST

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Abstract—This paper critically reviews certain trends in the medical anthropological literature on the Middle East. It identifies and analyzes the dominant theoretical orientations found in the study of medical beliefs, folk illness, healing and competing medical systems. Data from an Egyptian village are used to illustrate some of the theoretical limitations which characterize the study of these dimensions of the indigenous Middle Eastern health system. The paper advocates a political economy perspective which undermines the idealist, reductionist and dualist approaches to the study of health and illness in the Middle East. Alternatively, it suggests that analysis of health systems requires their placement in their broader political-economic environment. Health and illness are thus conceptualized as results of historically specific social orders rather than the consequences of ideologies of obscure origins.

INTRODUCTION

Anthropological studies of health systems in the Middle East have been extremely limited in number and in scope.* Anthropological accounts of health and illness are with few exceptions confined to the present decade. Only a limited body of literature is available on the subject and, with the exception of some articles and a few unpublished dissertations on indigenous medicine in the area, few major published works are found. Anthropological accounts of health systems in the Middle East are scattered and often obscured in the midst of more general accounts of the area or confined to article length publications. Such accounts generally provide superficial descriptions of medical beliefs and practices from a relativistic perspective which stresses the functional utility of beliefs and practices while ignoring the basis of their existence and perpetuation.

The purpose of this paper is to provide a critical review of certain trends in the anthropological study of the contemporary indigenous Middle Eastern health system. It is not my intent to present an exhaustive survey of anthropological studies of health and illness in the Middle East. Instead, my attention is directed to the *analytical traditions* which have characterized the study of certain dimensions of the contemporary indigenous health system in the region. These analytical approaches are illustrated by selected

examples from the published works of anthropologists. Since culturally oriented psychiatrists, in particular, have shared anthropologists' interests in various aspects of the indigenous Middle Eastern health system, their works are also selected for illustrative purposes. In short, this paper focuses on ethnomedical studies, i.e. on studies which view illness, not simply as a biological deviation, but as a cultural category and as a set of culturally related events [2]. Additionally, it evaluates the analytical orientations of studies which are concerned with the effects of socio-cultural factors, particularly indigenous medical beliefs and practices, in conditioning Middle Eastern peoples' responsiveness to the introduction of modern health care. Certain limitations of the analytical orientations which have characterized the investigation of these topics are noted in light of data derived from a study of power, health and illness in the Egyptian village of FatiHa, where I conducted fieldwork during the period between August 1974 and July 1975.

ETHNOMEDICAL STUDIES

Examination of the ethnomedical literature on the Middle East indicates primary concern with medical beliefs, culture-bound syndromes or folk illnesses and healing. Numerous investigators have given principal attention to indigenous beliefs and definitions of illness. This is illustrated in the early classical works (such as Walker's 1934 account of *Folk Medicine in Modern Egypt* and Westermarck's 1926 compilation of *Ritual and Belief in Morocco*) as well as in contemporary studies by psychiatrists [e.g. 3-8] and social scientists, particularly anthropologists [e.g. 9-16]. A number of these studies provide descriptions of indigenous conceptions of illness which contrast with biomedical interpretations of disease. In this regard, one notes the relative insignificance of the notion of body-mind duality in the Middle East. Unlike the biomedical dualistic orientation which differentiates "physical" and "mental" illness, the indigenous

* Reviews of the general medical anthropological literature indicate that "... neither a widely shared definition of the field nor an agreement about its boundaries has emerged" [1; cf. 2]. One notes the absence of a uniformly applied theoretical paradigm in the cross-cultural study of health systems. Similarly, for the Middle East, it is not possible to delineate a medical anthropology of the region on the basis of the consistent application of a set of theoretical models. Given the absence of a shared and conceptually based view of the medical anthropology of the Middle East (aside from the general tendency towards reductionism noted below), it is useful to follow earlier suggestions of turning to the criterion of content in identifying culturally oriented studies of health systems. [1].

Middle Eastern integrated view of sickness is characterized by a holistic orientation. Accordingly, all forms of illness are viewed as affecting the physical self, the patient's attitudes and moods, as well as his/her social relations. Sickness is regarded as both psychosocial and physical maladaptation [14; cf. 9, 13].

While some investigators have noted the indigenous holistic conception of illness, others have tended to impose the reductionist and dualistic ideology which permeates Western medicine on the study of illness in the Middle East. Thus indigenous multi-causal explanations of illness are reduced to single causes. Moreover, and in accordance with the dualistic tendency which distinguishes "physical" and "mental" illnesses, illness is described as "psychological", without reference to physical debility. Consequently, analysis of culturally significant illness states has often proceeded entirely at the psychocultural level [e.g. 12, 17, 18], although such illnesses may well represent expressions or ways of coping with structural bodily changes [19]. Regarding the tendency towards reductionism in the study of indigenous illness causation, this is reflected in investigators' emphasis on supernatural etiology [e.g. 5, 10, 12]. Contrary to this emphasis, data from the village of FatiHa indicate that illness causation is multidimensional and that it is necessary to distinguish different levels of causation [cf. 20]. In addition to efficient and instrumental causes (who causes illness, and how it is precipitated), analysis of local interpretations of illness discloses ultimate causes (*why* illness occurs) which involve the social dimension of the wordly environment. Extended case studies reveal that interpretation of illness is intimately linked to socially significant relations and events. Even in cases where illness is associated with supernatural beings and powers (e.g. spirit intrusion, sorcery and the evil eye), the *ultimate cause* of illness is social. Thus, while analysts of the Middle Eastern indigenous medical system continue to be fascinated by supernatural illness causation, the peasants of FatiHa themselves identify social conflict and asymmetrical power relations as the *ultimate* causes of sickness [14].

Further examination of the ethnomedical literature on the Middle East indicates concern with culture-bound syndromes or folk illness. Description and analyses of such illness, notably spirit possession in its various local forms, have been presented by both psychiatrists and anthropologists. For psychiatrists, the clearly elitist attitudes of some of these medical professionals prompts them to describe interpretations of sickness by folk healers and lay persons as reflecting the illiteracy of indigenous peoples, their irrationality, or their traditionalism [e.g. 4, 6, 21]. Additionally, one notes a tendency among these medical professionals of adopting a restricted, idealist "cultural" perspective which identifies local values and role expectations as the primary correlates of what El-Islam [21] refers to as Culture Bound Neurosis and to which Okasha [6] attaches the diagnostic labels "hysterical," "anxious," "obsessional," "demanding and demuring" and "schizoid". In short, psychiatrists have generally tended to view spirit possession as a manifestation of psychopathology which they correlate with narrowly defined "cultural" variables.

Unlike psychiatrists, anthropologists [e.g.

12, 17, 22], in typical cultural relativistic style, have focused on the functional utility of spirit intrusion in the Middle Eastern cultural context in which it occurs. The "safety valve" argument is illustrative of this tendency. Accordingly, spirit possession is linked to stressful social roles, and the resulting illness is described as a functional mechanism of social control. But no attempt, beyond reference to local role expectations, is made to explain why some roles are more stressful than others in the first place. Hence the emergence of a tautological argument. As indicated by the study of the illness of 'uzr, a local variant of spirit possession in FatiHa [23], what this functionalist explanation ignores is that it is the sociocultural system itself which defines the necessary functions of its elements (roles and illness, both). Functional considerations identify the rationality of the elements while ignoring the rationality of the broader structure within which such elements operate. It must be emphasized that these elements operate within certain structural constraints, namely specific systems of material production with associated socio-political and ideological elements which give continuity to stressful roles. In short, in order to explain the continued significance of certain roles, or stress associated with them, one must move, conceptually, outside the analytical boundaries of roles themselves to consider the structural elements which maintain these roles. Functionalist explanations of folk illness in the Middle East do not extend serious consideration to such structural constraints, i.e. to the political-economic conditions and asymmetrical power relations which underlie conditions of stressfulness associated with culturally significant afflictions such as spirit possession. Thus contrary to the emphasis on female *role* as a correlate of spirit possession [17, 21], the analysis of 'uzr cases in the village of FatiHa indicates that it is not simply gender role which is likely to precipitate the illness. When one focuses on power differentials and associated political-economic variables, rather than roles, it becomes evident that variation in the frequency of the affliction occurs *among* women (and among men) as well as *between* women and men [23].

Further scrutiny of the Middle Eastern literature on the indigenous health system shows that, in addition to concerning themselves with ethnomedical beliefs, investigators have focused their attention on healing. In this regard, one is often left with the impression that healing forms derive straightforwardly from medical beliefs, without regard for the dynamics of health care. The study of healing in the village of FatiHa leads to different conclusions. One notes the absence of perfect correspondence between expressed beliefs about illness, the reporting of definitive symptoms, and medical treatment [14, cf. 4, 9]. Selection of appropriate treatment is neither random, nor does it follow straightforwardly from an underlying logic of culturally shared categories of illness explanations [14]. Of particular significance, and in accordance with the political-economic orientation of the present critique, is the more fundamental question of social legitimation of the sick role, upon which initiation of treatment is contingent. Of additional, and related, significance is the differential allocation of valued resources for the treatment of persons of different

social identities. In fact, two persons may present identical symptoms and one would be denied the label "sick" while the other would be granted it readily. Neither is the severity of the symptomatic person's condition as perceived by him/herself a guarantee that the illness labelling would be granted and the necessary curative regimens pursued. In fact, it is evident that people whose contributions and social standing (as well as health) are highly valued may be granted the label "ill" even with the presentation of the slightest symptoms indicative of ill health. For example, since husbands are recognized as the primary "bread winners" of the family, they are urged to seek medical treatment at the slightest indication of illness. In contrast, powerless daughters-in-law in extended family households are often denied the legitimacy of the sick role, unless they have access to a significant power base (e.g. ownership of land, membership in a powerful family, education). When such legitimation is granted to relatively powerless persons, they are likely to receive the least costly form of illness treatment.

STUDIES OF COMPETING MEDICAL SYSTEMS

Over the past decade, the literature on health care in the Middle East indicates increased consideration, by international agencies, health care professionals and social scientists, of the health sector in relation to schemes of socio-economic development. Anthropologists with interest in the Middle East have begun to contribute to an area of study which has been of traditional concern to medical anthropology, namely the study of competing medical systems. In reviewing the relevant limited literature on this topic, it is evident that primary consideration is extended to the effect of indigenous values and health beliefs and practices in conditioning local populations' responsiveness to the introduction of modern health care [e.g. 16, 24, 25]. Guided by an idealist conception of culture, studies of health care have devoted primary attention to aspects of cognition and rationalizations related to health and illness. Such studies reason that since the indigenous Middle Eastern medical philosophy contradicts the underlying logic of modern medical treatment, this form of treatment may be rejected. In attending to this problem of what Kunstader [26] has referred to as "cognitive dissonance" or "cultural conflict" (the assertion that conflicts exist between traditional illness classification and their associated causes and treatment, on the one hand and modern medical practice on the other), the anthropologist, as translator of indigenous philosophy, undertakes the task of identifying areas of possible blend and conflict and preaches tolerance of indigenous ideas and practices to biomedically oriented professionals [16].

There is no doubt that indigenous concepts of illness are relevant to problems of health care. In FatiHa where physicians' medical explanatory models differ from interpretations of sickness by lay persons and folk healers, these conceptual differences cause incompatible expectations of therapeutic regimens and may result in the patient (and his/her family's) non-compliance with the directives of health care professionals. Thus the proponents of the "cognitive dis-

sonance" argument are correct in considering the importance of indigenous concepts of illness. But these researchers must recognize, as none have to date, the dialectical relations between these beliefs people so firmly hold and the social conditions under which they live. The error of the literature is to isolate these belief systems from social conditions. In short, the limitation of studies of competing medical systems in the Middle East lies, not in their concern with indigenous medical beliefs, as such, but in their emphasis on such beliefs to the neglect of the political-economic context of health care. The village of FatiHa offers still another example of the importance of political-economic variables; in a survey of responses to illness over a one year period among the adult inhabitants of 100 households in the village, it was evident that in seeking medical care, beyond the family context, the physician was by far the first choice of the villagers [27]. But in spite of the fact that villagers value modern medical services and judge their utilization as important status symbols, such services are not always accessible. As peasants in a centralized state society with characteristic social stratification and associated power differentials, their health care needs are accorded low priority. Indeed, medical care for the peasants of FatiHa, like the rural inhabitants of other parts of Egypt and the underprivileged classes of the urban areas, cannot be divorced from the sociopolitical superordinate power relations which direct every facet of their lives. The peasants of FatiHa, like others in the Middle East, are part of a stratified sociopolitical system. Their subservient power status within the nation state precludes independent planning of their lives in their own best interest.

DISCUSSION

Review of studies of indigenous medical beliefs, folk illness, healing and competing medical systems in the Middle East indicates the predominance of a particularistic, reductionist orientation. Anthropologists who are guided by a functionalist orientation stress the utility of particular medical beliefs and practices. Psychiatrists, preoccupied with the identification of the Western diagnostic equivalents of culture-bound syndromes, and the narrowly defined "cultural" correlates of such afflictions, show minimal concern for the overall structures of societies where specific health problems occur.

Medical anthropological studies of the Middle East also espouse an idealist conception of culture. This idealist orientation of medical anthropological studies is not unique to the Middle East. It has been noted for other regions [28, 29]. The African anthropologist Omafume Onoge has referred to this idealist orientation as the "socio-culturalism" of anthropological studies of health care, a reductionist outlook which has tended to elevate the "cultural" component (narrowly defined as values, ideas and roles) into an omnibus explanation [29]. Guided by such a restricted "cultural" perspective, students of Middle Eastern health care systems have devoted much attention to investigating cognition and roles, while largely ignoring sociopolitical organization which transcends the boundaries of local institutions and beliefs. Thus,

reductionism replaces the search for institutional constraints which determine the "choice" of one form of medical treatment over another.

Because of the fundamentally idealist conception of culture which guides studies of health systems in the Middle East, one notes the neglect of class differences and their relation to access to medical care, susceptibility to illness, and their influence in the development of national health care policies. In short, there is a tendency to shun what Janzen has termed the macro-level of analysis which surpasses the context of the family and the local community [30]. The underprivileged people of the Middle East who are the subject of anthropological investigation do not simply live an isolated independent existence; they are part of stratified socio-political entities. Their subservient power status blocks independent planning of their lives and leaves them subject to the imposed planning and priorities of the ruling power elite. Moreover, awareness of the national context of anthropologists' study communities developed through macro-level conceptualizations cannot be presented in isolation from international domination, interventions and control. In this regard one notes the absence of a serious attempt by researchers to examine the impact of colonial domination, whether political or economic on the political economy of the Middle East and the relation of the latter to health. In contrast to Darity's [24] identification of "nationalism" as an impediment to the acceptance of modern health care, Jim Paul contends that medicine is absolutely inseparable from imperialism. He demonstrates how colonial doctors function as agents of imperialism while modern medical systems provide social control and reproduce a labour force to suit the requirements of colonial development [31].

In the foregoing critique of the medical anthropological literature on the Middle East, I have noted the overwhelming emphasis on local ideas and practices related to health and illness. This is not to say that material considerations which bear upon the issue of access to health care are completely ignored. In fact, some authors with concern for health care problems in the region make explicit reference to the limited availability of modern health care facilities, the necessity of travelling long distances in pursuit of modern medical treatment, and they even provide a sympathetic mention of the poverty of the rural people of the Middle East [24, 32, 33]. But reference to poverty does not entail identification of structural relations which perpetuate conditions of poverty. Reference to poverty is not a substitute for examining the structural constraints associated with particular productive systems and related exploitative relations and state imposed policies which foster ill-health and which limit access to health care. Moreover, poverty in the Middle East is not synonymous with the underdevelopment of the region. In examining the relationship between problems of health care and poverty, the latter should not be assumed to be an original condition. It is necessary to explain such problems in relation to developing historical systems of social production and the related process of underdevelopment in the Middle East. In short, amelioration of health problems requires the consideration of these problems in their specific historical and political-economic con-

texts. What is needed is the construction of analytical models which would explain cross-cultural variations in the provision of health care services and guide the formulation of realistic health care policies.

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CORRESPONDENCE

Dear Sir,

The mania for sons: an analyses of social values in South Asia. *Soc. Sci. Med.* **14B**, 107, 1980.

The paper presents an impressive set of data to argue for the presence of strong son preference in India. However, there seems to be a need for clarifying the issue further.

1. Though the paper does not explicitly say so, I am assuming, in view of the question addressed in the paper, that the 700 respondents using the services of Hospital B are those primarily wanting to find out about the sex of the expected child and they do not fall in other categories (like wanting to detect chromosome abnormalities) described for Hospital A in Table 1. Apparently, these 700 respondents were not so much limiters of family size as those who wished to know the sex of the foetus before deciding to abort. Six hundred and eighty of these respondents turning up to avail themselves of the sex determination services to make sure that they have a boy compared to only 20 wanting to make sure they have a girl, of course, indicates the presence of a strong son preference in the population from which these respondents came. There is, however, a strong possibility that these parents have a very high proportion of female children among their living children (I suspect that a very high proportion of these parents may have *only* daughters and probably two or more daughters). Even if this speculation turns out to be true, this does not change the above observation about son preference.

In the absence of son preference, one would expect an equal number of parents having only/predominantly male children to come to avail themselves of this sex determination service. However, an analysis of these parents by the sex and number of living children would help examine (i) the strength of such son preference in the community, and (ii) the selectivity of the study group. A related question in this context is this: Is there a genetic disposition for some parents to continue to have a child of a particular sex? This

question becomes important in view of the very low sex ratio of foetuses in the study population, being 450 female and 250 male foetuses, a finding which requires further comment or explanation: (Is it an additional indication of selectivity of the group itself?)

2. Also, what exactly is the proportion of male foetuses suspected to have genetic disorder? (The presence of such foetuses is indicated in the paper but not the extent). What is the corresponding proportion among female foetuses? These questions bring me back to the reason why, in the first place, the parents went to avail themselves of this genetic service. If the reason is more than simply sex determination and if it involves some suspected genetic disorder, the issue of sex preferences becomes more complex in view of sex differentials in the probability of genetic disorders, difficulties in determining the sex of the foetus itself (Phenotypical sex), the sex distribution of the genetically disordered children they already have, and so on.

3. To examine the differential prevalence of tubectomy and vesectomy among men and women *based on data from a single hospital* can be very misleading. It is not unusual in India that hospitals with better facilities undertake a lot of tubectomies while the smaller hospitals and Primary Health Centres perform vesectomies. This is in fact necessitated because of the relatively better medical facilities required for a tubectomy compared to a vesectomy. Looking at the national figure, the tubectomies constitute only 27.3% of the total sterilizations done until March 1977 (Family Welfare Program in India, Yearbook, 1976-77, Government of India). Therefore, the higher proportion of tubectomies reported in the paper is more a characteristic of the service sources studied than a general finding.

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I. INTRODUCTION

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This volume considers classification and causality, two important aspects of thought in African medicine and health. The subject will be pursued particularly in those settings where multiple paradigms of diagnosis and treatment are found. Although there has been voluminous work, usually in community studies, on the relationship of disease and healing to spirit possession and mediumship, on the social dynamics of witchcraft and witchcraft eradication movements, and on magic and ritual in curing ceremonies, there is a need now to better comprehend within a single general model the interrelations among these several types of disease theories, and between them and notions of modern medicine, or to account for diseases and conditions deemed appropriate for biomedical practitioners. Further, there is a need to show how biomedical paradigms have themselves been assimilated to African thought, and now exist alongside of, or synthesized with, other modes of thought and practice.

This is the second part of a project on "Medicine and Society in Africa" sponsored by the Joint Committee on African Studies of the American Council of Learned Societies and the Social Science Research Council. Previously, in a work entitled *The Social History of Disease and Medicine in Africa* [1], the project's focus was on the manner in which disease patterns in history had led to social change, and the way they had shaped medical responses. In that phase of the project, there was a concern to overcome the sterile tendency found in much current writing to divide simplistically "modern" from "traditional" medicine, or "scientific" from "magical" thinking in Africa. Rather, an effort was made to document the relationship, over many decades and centuries, of various types of medicines from major civilization forms such as Islamic medicine, or Bantu therapy cults, to techniques of Western biomedicine introduced with colonialism, and all of these to long-standing practical techniques of birthing, bone-setting, and herbalism.

Whereas the just-cited focus was on how Africa's medical systems, in their varied forms, came into existence in response to perceived diseases and stress patterns, the present volume's emphasis is on how these medical systems function in the contemporary world, and how studies of them may be accurately made. Also, where the subject is suffering, pain and bewilderment, its urgency never permits its students to ignore for long the practical side, the domain of the practitioners. Some of the central questions of this volume are about the utility and sufficiency of systemic models for the translation from one mode of thought to another, on the one hand, and on the other the precision and salience of broader cultural frameworks. So the comparative study of medical culture and medical thought is at once a dialogue between researchers and practitioners, as well as between researchers and policy-makers.

That dialogue includes a number of questions which have served as touch-stones for the work which went into the present volume: questions about the nature of alternative logics or causal and classificatory modes in African medicine and health; questions about the context within which these alternative logics are brought to bear on the interpretation and treatment of affliction; questions about the relative salience or weighting of models and schemes in relation to their context; questions over the degree to which either a pathology-oriented disease model or a health and wholeness model, or some combination of the two, might be used in analyzing the gamut of societies' medical thought and action patterns; and, questions over the applicability of studies on cultural thought systems to planning and conducting contemporary health promotion and care campaigns [2,3].

These issues were considered in detail in the conference on *African Medical and Health Systems as Systems of Thought, Causality and Taxonomy* held 23-26 June 1980 at Emmanuel College, Cambridge, England. As is often the case, especially in effective conferences as this was, the proceedings reflect different syntheses of the issues than those formulated by prior plans. The chemistry of a good conference leads to unanticipated avenues in the discussion and to new findings. These are recorded in the introductions to Sections II-V and in Section VI on "Issues and Findings" which reconstructs some of the debates. These may be read alone, or as a running commentary on the issues of the volume.

The conference opened with a session on "Normative Well-being vs Illness Models in the Study of African Therapeutics"; these papers and a comment are given in Section II, "Introduction to the Issues". They concern, among other matters, the challenge of broadening the focus of cultural studies of African medicine to include "health" causality and classification. Two further sessions of the conference presented recent or on-going field research conducted with attention to causality, classification and healing in pluralistic medical settings. The first of these sessions was focused on Central Africa. The second drew from as wide a range of societies as possible within the African continent or its diaspora cultures. Another session of the conference was devoted to more

theoretical issues having to do with the formulation of appropriate analyses for alternative logics in therapeutic settings. Yet another session brought together clinical, community and public health perspectives in an effort to determine how a clearer understanding of the processes of code-switching by health-seeking clients, of the presence of alternative therapies, of pluralistic taxonomies, might influence the therapist's or health official's strategies and policies. A final session sought to summarize the implications of the conference for further scholarship, health care, and for health policy.

The issues of the last session anticipate the third and final stage of the "Medicine and Society" project on the subject of production and welfare in medical policy, that is of the effects of the political economy upon health, with a desire to mobilize medical thought and practice as formulated in the present publication [2,3].

A conference devoted to the subject of African thought in 1980, albeit one devoted to a specialized area of thought such as medicine and health, does not occur in an intellectual vacuum. It is appropriate to situate the present volume with respect to Professors Karp's and Bird's recent *Explorations in African Systems of Thought* [4], and with respect to their common ancestor as it were: *African Systems of Thought, Religious Belief and Ritual: Traditional and Modern* [5], based on a seminar sponsored twenty years ago by International African Institute in Salisbury, Zimbabwe, and edited by Professor Fortes and Mme Dieterlen. Reviewing the volume they edited, Fortes and Dieterlen observed two broadly contrasting approaches. One gave priority to the total body of knowledge, belief and doctrine; it gave systemic accounts of this, and was adopted by French scholars, arising from their interest in cosmology. The other linked the body of knowledge and beliefs to the actualities of their social organization and daily life; it therefore attached systems of thought functionally to social structure; this approach was adopted by British scholars and arose from their prime interest in ritual.

Ivan Karp, writing in the introduction to the volume which in its title deliberately recalls the earlier work, and which therefore implies an intention to review progress since that pioneer undertaking, suggests that what we see now is in fact greater complication, more problems: the rationalist/empiricist dichotomy is only a component of these; indeed, Kopytoff's paper in the Karp and Bird volume questions the soundness of even a rough correspondence between social and intellectual change. His subjects view the social world as entropic; perhaps the study of modes of thought is also entropic? To the list of greater complications, we must also add epistemological problems such as the effect of the research undertaking upon the image of the cultural system; and practical problems such as language competence. We may also add the problem of the relationship of thought to the context in which it is articulated. In consequence, Karp suggests, devising models for the analysis of thought in relation to experience is the most important task before us; the papers of the present collection offer many, frequently complex, examples of such models.

This volume shares the substance of Karp's sentiment, but not its singlemindedness. Common ground is found in the debate posed between the papers in Sections III and IV below, that is between the "systemizers" and the "contextualizers". However, perhaps because of the practical and concrete dimensions of medical thought and cosmology, contributions here differ from many of those in the Karp and Bird collection in that they consistently engage the epistemological issue at stages closer to first principles, both of identification and of definition. This is especially so in Sections II and IV—the former addressing philosophical and theoretical issues for the most part, the latter addressing applications of scholarship to very concrete practice. A consequence of this is that, as editors, we are compelled to employ a less elaborate organizing schema for the sections of the volume, and to resist proliferation of terminology in the theoretical debate. Thus, whilst sharing the same intellectual progenitor from the Salisbury seminar, the two children of its twentieth year have somewhat different natures.

Participants in the Cambridge conference included:

Don Bates, M.D., Ph.D.

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II. DEFINING THE ISSUES

This section presents papers given in the opening session of the Conference. All converge upon the need to define closely the field of study in order to prevent confusion through the unwitting commission of category mistakes. Prins approaches it from a review of the intellectual consequences of the present conventional division of labour; Janzen is concerned to restore a full reading of Evans-Pritchard's seminal statement in *Witchcraft, Oracles and Magic among the Azande* and to alert us to the consequences of the still widely unquestioned but inaccurate received interpretation of the message of that famous book; Mudimbe also seeks to break up what he regards as an inefficient and crusty set of polarities between putative "modern" and "traditional" areas of both thought and data.

However, such a ground-clearing exercise is insufficient on its own. All seek to embrace within one conceptual frame the realm of the Greek goddess Hygeia who reigned over hygiene and health, and that of Asclepius, the god of healing, who reigned over medicine. Both practical and analytic advantages may underpin the value of expanding the field of African medical studies in this way: not only does this greater field of vision account more adequately for adaptive health systems, it also offers a better basis upon which to build public health programmes. Sections III and IV engage the first point, Section V the latter.

But the marriage of Hygeia to Asclepius is no easy affair. One reason is that "health" is a word which requires careful definition. In his comments (given here below), Gilbert Lewis pointed out that always one must be clear in distinguishing the actor's from the observer's point of view, and that in these double strands of analysis the way that the relation of "health" to "normality" is seen need not necessarily be congruent. It is a point picked up from Prins' paper, but given redoubled force, for no simple postulate "health" seems now to be available to stand in contrast to "illness": "positive health in any sense must involve values, ethics, ideals as well as needs, desires and wants". Furthermore, for the observer "health" is frequently eclipsed by the more visible and exciting immediacy of "illness". Yet is it really always so inescapably complex? Professor Bates addressed the matter thus:

...are there not really two kinds of health which may be discontinuous or continuous? Gilbert Lewis has mentioned positive health not just merely as the absence of disease... health is not necessarily just the other side of the coin. But I think there is a health that is the other side of the coin and that sometimes is what is being talked about here; that is to say, the absence of disease. This is the other side of the coin and it is something which is unavoidable in discussions about illness. You have to have that other side. It's implicit.

But then there is an extension, or perhaps a completely different health, which is a part of the notion of positive health... and it seems to be that you can—at least for the purposes of discussion—separate out these two healths. I think that the "health of the Utopia" perhaps more often has to do with the positive notion of health... and so I would suggest that health as the absence of disease is in fact a negative concept. Absence is negative. There is a "negative health" in a sense—in the absence of disease—which must be part of your discussion. But the other is something that you need not necessarily go on to just because you admit that you need the first...

Janzen: Whose conceptions are we talking about here? Our own, as analysts, or those of the people we observe?

Bates: Either one. What I'm saying is that the conception of positive health may be quite different from ours...

Whilst this exchange, in coordination with Lewis' remarks below, makes clear the need for delicate and precise definition, both Lewis and Bates are sympathetic to a joint medical/"health" orientation. Once this is granted as fit subject matter for scholarly enquiry, a number of further questions of analytic urgency propose themselves. First, does this field have inherent characteristics that will be universally visible, wherever one wishes to look? In an early session the issue came forward directly:

Prins: ...can I suggest that there is one major division that seems to be coming to the surface: It's between those of us who believe that it's both possible and necessary to study medicine as an entity, and those who believe that it is possible and essential to study medicine in a socially embedded context...

To the session Chairman's prefatory remark Professor Fortes responded:

I think that you've put your finger on what is a very crucial problem here, and that is that if you follow up the proposition to be semiotic or embedded, why choose medicine for that? You can do that with anything; you'd be in the same place. If you started with agriculture, politics or anything, you'd end in the same place. Therefore there's nothing specific about that particular way of looking at things. But there is something quite specific, particular, about problems of medicine whether it be in Africa (and I'm not at all sure if there's a homogeneous "African pattern"), whether it be with us or anywhere.

The two things that stand out are that in all human societies individuals get sick and they know that they're sick. That's important. And in all human societies there are institutionalised forms of trying to deal with this sickness on different levels. Now I think that unless we stick to that particular level, we'll get cast adrift in an ocean of words which can be applied to anything you want to choose in Africa, outside Africa, so much so that you get them mixed up.

What we should get back into the topic is to talk about this phenomenon, to start with particular concerns which I think came up in Prins' paper and in John Janzen's paper too: the problems of pain and suffering; begin there. What happens there? The problems of the confrontation with the ultimate fact of death. What happens there? The problems of the perpetual vulnerability of humanity; when you're sixty years old, you'll feel that too. Those are the kinds of things. How do societies tackle them?

Now beyond this there are many intriguing things—structural things. For instance, one of the structural things is the fact that there must be a gulf of sorts between the healer and the patient. Patients do not heal themselves. It is a very intriguing phenomenon which is worth exploring all over the world. A very strange thing: doctors do not cure themselves, diviners do not divine for themselves in the Africa that I know, by definition, because you cheat yourself. So there's an aspect there that leads to institutionalisation in the disease and how you treat it. A very fundamental question, universal. And I think that Murray Last's contribution was absolutely vital because he makes the point about the actor, the individual actor or the group actor who, when he was in the position to choose, abdicates from decision-taking. Why does he have to abdicate from decision taking about himself? These kinds of questions lead us to medicine proper, to sickness, to disease, to health.

On the health side, I think that Gilbert Lewis made it very, very clear indeed that you're in a quite different realm because you're in a realm primarily of moral behaviour...

Fortes' concluding observation immediately generates another question. Is there an autonomous domain for the systemic study of the intellectual, abstracted aspects of a medical culture, a domain broader and necessarily prior to a study in the concrete; or having once launched into a study of the field, must it unavoidably be seen in a social context determined by economic, political and technological considerations? This not only engages the "systematisers" with the "contextualisers", but raises the issue of what constitutes appropriate intellectual apparatus: the Greater versus the Lesser Systematisers.

The papers in this section raise other matters. Looking very much more closely at a new Unified Realm of Hygeia and Asclepius—health culture and medical culture—as together they seek to overcome disease, how are the changing multiple foci of African therapies, their causal and interpretive theories and ideologies, to be studied? As Mudimbe puts it in his paper, how are the relationships between therapeutic signs and "the world" of experience aligned in a way which can be comprehensibly analysed? Furthermore, once studied, how are they to be understood and then marshalled in planning culturally sensitive medical interventions and health programmes? After the exchange on the subject given above, can "health" be organised cognitively in a way similar to illness? What happens when logics and signs within a medical culture grow old, become imprecise or ambiguous?

These and other questions about the validity of conventional African medical studies are raised. The manner in which they can be opened up offers cues for further analytical development in the era of pluralistic medical and health cultures now at hand.

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"WHAT IS TO BE DONE? BURNING QUESTIONS OF OUR MOVEMENT"

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Abstract—The paper suggests that a danger which faces the integrated study of health and medicine in Africa is a failure to attend closely enough at this early stage to the differences in concepts and taxonomies originating in each contributing specialism. This is because the new division of the subject which accompanies an integrated perspective upon it no longer follows the division of labour which used to be, broadly, between disciplines. So as those stark but comforting contrasts blur, it is important to keep hold of a robust and usable conceptual apparatus if we are to avoid deep confusion. Therefore, preferring to risk oversimplification rather than precocious complication, each of the three contributing disciplines—medicine, anthropology and history—is examined and the burning questions of the moment in each are proposed. In this process, the contributions which each can make to the new alignment become obvious. Equally, the limitations upon the new alignment are exposed, and the paper ends with a note of caution.

During the winter of 1901, Lenin cast his mind back over the history of Russian social democracy and forwards towards his hopes for the future. The result was a pamphlet, "What is to be done? Burning questions of our movement". In it, he proposed a periodisation of the Russian left during the preceding twenty years, which underpinned his conviction that the movement stood at a watershed [1]. Whilst it is not wise to be pedantic in seeing historical comparisons, I think that Lenin's pamphlet title might be appropriately borrowed for the present task, and that there is some merit in looking back in order to move forward. I certainly feel that the study of therapy and affliction in Africa stands now at an important threshold.

In an important sense, the concern with taxonomies shared by many of the detailed papers is fundamental because the vocabulary which we use and the common (but not identical) stock of ideas and of concepts which we share must be robust and usable, which probably means as simple as possible, if the various different expertises which converge upon questions of health and disease, and which are represented here, are to talk fruitfully to each other.

In the part of central Africa where I happened to work there are no stones, only endless, baking miles of sandy, scrubby bush. This made cooking a problem, only solved when iron cooking pots with integral tripod legs were brought into the region. Often a family will have two pots—a larger one for cooking porridge and a smaller one for relish. When I began to think about the medical culture of Bulozzi, I found two metaphorical cooking pots there. The first, and larger, gave shape to my thought [2], the three converging legs were a consideration of theories of disease, a thumb-nail sketch of a pluralist medical context and an outline of epidemiological history. The second, smaller and older, had for its legs the tripartite division of the subject which was for a long time taken to be both obvious and sufficient: between "western" medicine, African therapy and, again, epidemiology. Nor is it surprising that this old division has proved to be so resilient, for it reflects the broad

division of labour until the relatively recent past between doctors, anthropologists and historians.

This paper will look at each discipline and suggest what seem to be the burning questions in each at the moment. In doing this I shall try to be as simple as possible, saying obvious things, the intention being to give one man's view in order to stimulate discussion. Furthermore, for the same reason, I shall not engage the key epistemological questions of efficacy and normality extensively. More than the danger of appearing simple-minded, I fear the danger of losing our subject in precocious complications. By clarifying our minds in this way, I hope that we can look more effectively at the newer tripod where theories of disease and pluralism join epidemiological history and where the disciplinary division of labour is blurred. So to the first, the doctors' leg.

MEDICINE'S QUESTIONS

For the layman reading in the medical and social history of medicine, the most striking thing is the retreat from certainty. Today one sees two pairs of vividly contrasting conceptions attaching to the medical and social aspects respectively. In the first pair, on the one hand there is the triumphant note in the history of the conquest of infection. H. F. Dowling's recent book, *Fighting Infection*, is a good example of this. Full of martial language it recites the fascinating linked history of the chain which began with serum therapy, led to the sulphonamides, to penicillin and streptomycin: "In the first three quarters of the twentieth century, more specific remedies and preventives were devised for the control of infectious diseases than during the entire history of mankind before that time" [3]. Work of this tenor persists with particular force in a certain sort of history of western medicine in Africa, work written by physicians of whom Professor Gelfand is among the most prominent. Because of the ethical charge within the physician's profession—the double meaning intended by Eliot Freidson in the title of his seminal work, *Profession of Medicine*

—the view of medicine in the Rhodesias which emerges from Gelfand's pages has a zealous glow [4-6]. Whilst not pretending to total altruism in provision of medical services to Africans, his work nevertheless derives a special intensity and an apolitical, detached aspect from his being a respected expert in settler society, who was respected because he was manager of the great drugs, so visibly superior to other alternatives in fighting infectious diseases. Such is what Professor Ranger calls 'Godly medicine' in his paper [7], but better than that it is effective. This is because it possesses both a powerful and specific technology and a powerful and specific reductive, diagnostic procedure, which moves always towards the single, observable, impersonal cause—the closer, the more efficacious. It is here that the contrasting conception is clearest.

I suppose that the most burning question in medical planning today is whether curative medicine and public health, being conceptually different in approach, are always in antagonism since they are usually rival claimants upon limited funds. Nowhere is this debate more heated than in the "Third World" countries. It reflects a more cautious evaluation of the potential of curative medicine; indeed, to one extreme critics like Ivan Illich argue that iatrogenic illness as a product of too obsessively overdeveloped a system of interventionist medicine, represents a major and growing threat to health [8]. In 1959 came an early and eloquent voicing of the doubters' case by René Dubos, one of the eminent combatants in the fight against infection. In his book, *Mirage of Health*, he proposed a now familiar idea that the decline of the epidemic infectious diseases of the nineteenth century, especially of tuberculosis and cholera, began well before the arrival of the powerful, specific drugs—the "magic bullets of medicine" as he called them—or even of the germ theory of disease [9]. Therefore, he was more impressed by the effects of public health measures upon such diseases but not for that reason of efficacy alone. There was a deep, conceptual difference although not to do primarily with the aetiology of diseases; this was a further stage. The contrast which he used to give shape to his book was between the Greek goddess Hygeia and the healing god, Asclepius. Hygeia represented not a pedestrian concept of hygiene, rather an exalted idea of "health as a natural order of things, a positive attribute to which men are entitled if they govern their lives wisely". Asclepius, who with Panakeia, the goddess of healing through knowledge of drugs, soon overtook Hygeia in importance, represented another, lesser conception: that of restoring health by correction of imperfections caused by disease or accident. Asclepius dominated because "to ward off disease or recover health, men as a rule find it easier to depend on healers than to attempt the more difficult task of living wisely" [9, p. 109]. So a simple and basic contrast is postulated between negative, illness oriented and positive, health oriented criteria. But Dubos went further, along the path subsequently taken both by those concerned to criticise over-developed interventionist medicine and those trying to study situations of medical pluralism. Dubos saw the doctrine of specific aetiology of disease overriding the emphasis placed by ancient medicine, and by many non-Western medical systems today, upon

the patient as a whole within his environment. In other words, he asked us to see the intellectual foundation upon which modern curative medicine is inevitably based, not as an advance, struggling from ignorance towards knowledge, rather as an option pursued at the expense of sacrificing others, notably the values of Hygeia. So within the wider debate between Hygeians and Asclepians lies a more far-reaching one.

In September 1979 the *British Medical Journal* published an article which reported that when asked to say which in a list of terms were 'diseases', physicians were markedly more inclusive than lay control groups. As the editorial of the same issue of the *Journal* summarised it, they "had a constant tendency to regard a wider range of phenomena as disease... General practitioners also had a broader usage than hospital physicians". An influential factor seemed to be the need for medical intervention. So the straightforward, pragmatic 'essentialist' or 'realist' view of disease is here challenged and Dr Campbell and his associates insist that a firmly nominalist taxonomy should be used, not only in research, but also in practice; and such a classification is by definition volatile [10, 11].

More recently, in June 1980, Dr Bernard Dixon has argued more radically, suggesting bluntly that the doctrine of specific aetiology is being superceded in much of the best new work "... both in clinical medicine and research it is now apparent that a once-fruitful concept has had its day. The notion that has formed the central axis of development for the past hundred years lacks explanatory potency to deal with the great burden of ill health today..." [12].

That this doubting chorus strengthens more over time seems to reflect two things. First, that the popular view of a doctor is only cogent as a healer of individuals. That is a consequence more of the taxonomy than of the technology. Pondering the issue of how the individualist orientation dictated by a theory of specific aetiology may be reconciled with the qualitatively different medicine required by the mass or group orientation of public health, Magdalena Sokolowska concluded that such doctoring was difficult and still rare because it required the doctor *also* to transcend many of his assumptions and expectations about his healing role [13]. And herein lies the rub for, as Dixon observed, many of the new health threats in industrial society require these rare public doctors. Addressing the recent CIBA symposium on health and disease in tribal societies, Dr Hugh-Jones remarked that "at King's College Hospital in London, I am cynical enough to say to students that I only need make three diagnoses to cover many of the illnesses one sees in the medical wards. These diagnoses are over-eating, over-smoking and psychological dependency and I think that the last is the most important" [14]. But why 'cynical'? In Sokolowska's terms this defensive use of that word proves her point. The difficulties which face the physician are not accommodated simply by broadening the anticipated range of causal influences. There is a fundamental conceptual problem built into the common logic of diagnosis.

Deduction is impossible without some benchmark, some idea of average normality. Frequently the degree of pain reported by the patient offers the phys-

ician a valuable aid towards diagnosis because he can compare the patient's pain with his expectation of the usual amount of pain in the hypothetical diagnosis under test. However, pain is not an impersonal entity and Mark Zborowski's famous work in New York suggests how, without extensive "control" for cultural factors, this mundane criterion may be most misleading [15, 16]. Returning to the new health threats mentioned by Dixon and Hugh-Jones, the same generic point holds, but with potentially far greater significance. The essentialist definition of disease incorporates the notion of a clinical threshold above which intervention is indicated. Thresholds below which it is 'safe' to be exposed to substances in the environment are set by public bodies, often after learned working parties have reported. In Britain, to take two recent examples, the exposure of the foetus to alcohol and of everyone, but, of particular importance, especially of small children to lead, have benefited from such attention.

What is clear from the extensive scientific challenge to the relevant official reports on each of these issues is that such levels represent not toxicological or physiological safety but, rather, socially acceptable levels of damage. 'Normal' has been confused with 'safe'. Let me illustrate very briefly from the case of lead.

Of the 92 natural chemical elements on the earth, against which we have evolved as a species, only about 25 appear to have been utilised by nature for essential roles in the chemistry of life processes; they include light elements, metals like copper, zinc, chromium, etc. Of the others, among the 'heavy metals', mercury and lead are notably toxic; both are neurotoxins. Lead is also the heavy metal most extensively released into the British environment—around 10,000 tons a year is sprayed out of vehicle exhaust pipes as a result of the use of tetra-ethyl-lead in petrol (where, incidentally, it serves no useful purpose except to enhance engine wear). However, the addition of lead to petrol is a practice which has been pursued for many years and therefore may be regarded as 'normal'. There is now a formidable support for the proposition that "body lead levels in the range now regarded as 'normal' are significantly associated with pathogenic effects on mental function in children. The manifestation of these effects includes disturbances of intelligence and/or more specific aspects of learning ability and/or hyperactivity" [17-19]. But since these huge numbers of children do not present themselves to a doctor with acute, clinically recognisable symptoms, their treatment under the established principles of curative medicine is not possible. The cure is political, not medical. So the second thing reflected by the chorus of doubt is that a new range of health threats which cannot be zapped with antibiotics exacerbates the double problem of defining the curative role and the form of intervention.

But it is far too easy for those who are not doctors to carp about those who are, and it is particularly easy to do so when viewing the contrasts between Hygeia and Asclepius, symbols of divergent perceptions of medical history. Turning to social medical history, another but related contrast stands forth.

Defining the profession of medicine, Eliot Freidson wrote that the possession of a monopoly in the exer-

cise of its work was an essential feature of a profession, and that in the case of medicine this had to wait upon a secure and practical technology, for what identified modern medicine was the criterion of peculiar efficacy: "The request is 'Doctor do something' not 'Doctor, tell me if this is true or not.' In this sense there is a profound difference between what might be called the consulting professions and the scholarly or learned professions," and, of course, the emergence of the 'doing' side of medicine is recent. Bezoar stones, Egyptian mummy and other more or less noxious placebos, were prominent among prescriptions in Europe for most of modern history [20, 21]. The 'doing' criterion of efficacy has a natural affinity for intervening Asclepius, for impersonal, reductive diagnosis, for a negative, illness-oriented, individualist definition of health. This old formulation may be under challenge in industrial societies but in an old-fashioned environment of infectious disease, so often found in Africa, it is much less so. The elements cohere tightly and for that reason the temptation is strong for those within that western tradition to view other medical cultures as antithetic, to see multicausal taxonomies as simply ineffectual and vague. This presents a practical difficulty for practitioners in Africa. Much as one might like to believe it, is there any useful space in an overall health programme for—from the Western viewpoint—conceptually vague therapeutics?

"Godly medicine" has a simple place for non-western therapeutics. I well recall a knock at my door late one night early during my fieldwork. Could I go and fetch an old man to come and visit a patient in the Mission dispensary ward? The next day I was delivered a blistering lecture by the Zambian Mission orderly about fetching witch doctors. The patient was ejected from the dispensary—a standing rule. Among more broad-minded medical men, an ancillary argument is made for being aware of the cultural context of the patient. But in that pioneering Makerere symposium guided by Maurice King, his chapter advocating a 'cross-cultural outlook,' with the best will in the world cannot be seen as more than an adjunct to the main thesis of *Medical care in developing countries*: that medicine in tropical countries is as much to do with poverty as with warm climates [22].

The comprehensive plan for generally available, need oriented, cost effective, intermediate technology health provision, combining appropriate curative services with extensive public health measures, which King advocated, arose directly from 'Hygeian' ideas, and his criticism of elaborate metropolitan hospitals and their appetite for funds addressed directly the conflict of interest between the two western health systems. He believes, and his plan shows, how there can be harmony, conceptual and financial. But a brief glance at the Zambian health service today, and knowledge of King's experiences in and departure from that country, suggest how inflamed are the political nerves played upon by that level of debate. It is to make the same point that was made internationally at the 1977 Annual Assembly of the World Health Organization which came to focus upon questions of food production and living standards, accepting that public health is inextricably linked with political action, that it cannot be just a function of specialist expertise. Here one sees that convergence with the

problems of health in industrial countries which caused Dr Dixon to suggest that in poor countries also the doctrine of specific aetiology was rapidly becoming bankrupt. But there is an important difference between Maurice King's plan and any pronouncement of the World Health Organization. It is that King's plan is intended for the grass roots, so other therapies could not be fitted in comfortably. Can we do better than King's sympathetic suggestion to "read some anthropology;... make the acquaintance of any anthropologists working in the vicinity..." [22, Chap. 4, p. 6]. *In practice*, at work in a sea of infectious disease, how can western physicians in poor countries internalise any other taxonomy than their own and be able to function effectively? Should they even try? Professor Foster also takes a cautious view, seeing midwives and "perhaps mental illness specialists" as the only likely recruits to the practice of medicine [23].

A different argument for a useful role might arise from a desire to use positive health, rather than negative disease and illness oriented criteria in assessing the impact of medical provision. Knowledge of the cultural context might yield a helpful health indicator. But again, in practice, how could that work? This is an issue which Dr Blom engages, and the 'survival of the conceived' index which he proposes, seems to suggest that to be intelligible, the statistic cannot be other than "negatively" derived: only this gives sharp data. The introductions to the seventh and eighth revisions of the W.H.O. International Classification of Disease both reiterated as much: "In the study of illness and death, therefore, a standard classification of disease and injury for statistical purposes is essential..."

In a paper from the Baltimore conference, Steven Feierman explained why Africanists should be interested in seventeenth century English history, for this was the period in which pluralist medical culture, where explanatory roles had precedence, began to decline [24, 25]. This decline showed that modern medicine could only ever replace a segment of the social functions of pluralist medicine—for it was not as good at explaining. The historical comparison becomes most instructive because recent anthropological work, notably John Janzen's *Quest for Therapy in Lower Zaire*, offers modern evidence with fine detail of precisely how people behave within a pluralist system. A recent study of madness in Stuart Buckinghamshire permits comparison; one sees a wide pattern of resort to kin help and wide therapeutic options in Africa and narrow nuclear family assistance and narrow options in England. So in this way the two fields of study can begin to interrogate each other. Feierman's essay highlights a wry contrast: what European medical and social historians describe is the change from pluralist to specific therapy whilst the anthropological historiography of non-western therapeutics has witnessed a change of interest in the reverse direction. Perhaps this very movement reflects the climate of caution I have just mentioned? After all times of doubt are frequently times for intellectual ferment.

ANTHROPOLOGY'S QUESTIONS

Let us examine the anthropological leg of our tri-

pod. We see two important changes moving in tandem. First, then, is the shift in subject matter from ethnographic descriptions seeking similarities with modern medical procedures, to the description of coherent but "closed" systems, to situations of medical pluralism. Second, there is a conceptual move from fairly elaborate systematic explanation of illness theories, interested in consistency, towards a progressively lower order of systematisation, much less impressed by consistency. That the first shift happened is to be seen in the conceptual differences among subsequent papers, and it is one reason for the shape of this collection; the other shift is by no means consensual either. Therefore I will pursue it a little here, for in fact one consequence which might arise from this debate could be to throw into question the 'pluralist' approach which some of us have found so helpful in the past.

Scholars are relieved of the obligation to act at once and with clinical precision which lies upon practitioners and that perhaps explains why their minds move further afield from the 'Gelfandian' starting point close to which practitioner/ethnographers remain, working often by analogy or seeking simple and inclusive reasons to explain African oddness [26]. (Gelfand himself gives the best illustration of this: "...running throughout all these reasearches we notice a basic pattern and a basic philosophy. It is obvious that the traditional African believes firstly that disease is caused by a spirit or *supernatural* agency, and secondly that many illnesses can be alleviated, or even cured, by the administration of one of many remedies *found in nature*" [27].) This is an explanation from the practitioner's viewpoint. Anthropologists also seek systematic insights, but from the patient's point of view, with therapy as a dependent variable.

To fit the behaviour of the afflicted into a frame of reference that is not analogy to western medicine, but is the whole cultural and social environment of the afflicted person, and to communicate this intelligibly is an intensely difficult task, for it is to substitute a positive 'normative well being' criterion of health for the illness criterion. This Harriet Ngubane does in her remarkable book about Zulu medicine [28]. Health is defined in Hygienian terms of balance implied in the verb *lungisa* "to put in order, arrange, adjust, set as it should be, tidy". Balance is moral order and symmetry [28, pp. 26-9]. The normative well-being criterion, since it extends beyond illness, will always require more than a monocausal therapeutic system, however effective within its own domain, because the need to 'explain' as much as to 'do' is so basic. Ngubane's account of the ways in which therapeutic actions serve these purposes is a lucid, highly systematic and closed, self-sufficient projection. All the resources required are indigenously generated. The exposition of the logic of action—a direct descendant in that line of endeavour fathered by Tylor—is at times stunningly elegant. (I am thinking here of the chapter which lays bare the meaning of colour symbolism.) "My main aim in this book," she writes, "has been to show that Zulu ideas and beliefs relating to illness and its treatment are part of a coherent body of knowledge that lends itself to being interpreted and analysed in a framework of sociological theory" [28,

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p. 151]. That aim is surely fulfilled for we believe at the end that these are the pathways of thought which are used. For those of us who work elsewhere in Southern Africa, there are strong resonances with hitherto incoherent and occasional observations of similar behaviour. But what is the book *not*?

It does not conform to Steven Feierman's two "rules of thumb" for the study of culture change in African medical systems, namely:

- (a) That the "field of misfortune must be defined independently of a society's own definitions of cultural domains, so that all systems of explanation are examined, and not merely a single dominant or coherent one."
- (b) "The systems of explanation must be examined in the context of social action" [24, p. 279].

It does not talk about medical pluralism, towards which Feierman's thumb inexorably points. But it does expose brilliantly a coherent logic of causation which is multi-faceted, and broadly predictable from these data.

In these omissions and commissions, Ngubane shares different characteristics with two other sorts of ethnography. With the decoders of signs like Victor Turner, she shares that technique of exposition which permits the reader to view the logic of causation derived from its social basis. With Gilbert Lewis, an anthropologist also concerned to exposed the logic of causation but who, unlike her, meets the first rule, prescribes the field of misfortune biologically and in detail first, and who is much less concerned with detailed coherence in the described patterns [29], she must share Feierman's opinion that in the end neither is able to understand the logic of the quest for therapy (which, in fairness, Lewis said explicitly that he chose not to do). The autonomous definition of changing patterns of biological disease has been a main concern of epidemiological historians who will appear shortly. But now we are left with unanswered questions. How compatible are Feierman's rules? Is the first rule right?

In the single most eloquent defence of the importance of making a description of disease in external biological terms, then comparing it to the particular cultural perception of illness, Gilbert Lewis suggests that the alternative is what Feierman's first rule also suggests—involuntary bondage to the subject culture's definition of affliction, hence an unnecessary constraint upon the researcher's scope of enquiry. One would thus miss the mass of undiagnosed but objectively present illness which Lewis, as a physician, found in the Sepik [30]. Yet Feierman believes that this tactic had left Lewis ill-equipped to report change, even if he wished to do so (or, presumably, the reasons for no change) in Sepik medical knowledge; in consequence, this obscures the logic of processual diagnosis. Now conversely, in that study primarily interested in pluralism and quest, Janzen's description of Kongo theories of illness does not follow Lewis's proposal, does not rely upon comparative knowledge of the biological disease environment; it arises from intellectual data, notably from his magnificent study of the healer Nzoamambu's medical cosmology. In this it is like Ngubane's work. So is it a conclusion that one purchases understanding of the logic of causation, following rule one, at the sacrifice

of understanding change—the logic of the quest—and that grasping the logic of the quest calls for an indigenous map of causation for the creation of which rule one has little relevance? This is worth spelling out.

Why have anthropologists interested in affliction spent such effort upon questions of witchcraft, asked Eva Gilles? Because, she sensibly replies, they have read and admired Evans-Pritchard on the Azande—although, as Janzen explains in the next pages, only highly selectively—and he was assumed to be interested only in their "theoretical aetiology rather than their common sense pathogenic level of explanation" [31]. That a full reading does not support this view of Evans-Pritchard does not matter for our purposes; what matters are the assumptions held about his views. So only the *middle* of the spectrum of biological illness gets attention: the minor afflictions, treated without recourse to explanation, are ignored; the epidemics, like smallpox in her region as in many others, including my own in the nineteenth century, are too big to handle and so are also left out of this focus. Application of the Lewis/Feierman method will restore the whole spectrum to our view, which is certainly interesting. But to explain a theory of disease like Evans-Pritchard or Ngubane, we only need look at the 'explanatory sector' of the autonomously defined whole spectrum. So the first rule may yield *interesting* data, but equally may not be *axiomatic* to the task of describing a theory of disease?

The second rule seems to be more easily accommodated. Its implication is that study of the quest acts as a test upon the theory of disease, and so it appears in Janzen's Kongo case studies. But perhaps what we need to ask, to know if the rules are compatible, is whether the procedure could work in reverse? To put it graphically, might Janzen-type case studies lead back to Ngubane or Lewis type accounts of causation (although obviously not to autonomous accounts of the disease environment)?

This question cannot be left in this form, for it presupposes the answer to another. Are highly coherent systems more or less likely to offer a resolution of the discord between 'cause' and 'quest' analyses than lower order systems—if that word can even be used—such as Lewis describes? One robust answer might arise from Murray Last's paper [32]: that, of course, it will be easier for "non-systems" such as he has seen, and that within such a context, this is anyway a non-question because it pre-supposes an explanatory function which is not sought by the people of Malumfashi, although popular with investigators who seek coherence in the way that Dr Gilles described it. What the quest will show is how not knowing or not caring to know about any therapeutic systems systematically makes it possible for people to live with, have recourse to and benefit from a pluralistic context. In passing it is worth noting that Gilbert Lewis's view, deriving from a similarly unsystematic milieu, is not exactly congruent; for whilst agreeing that "why it works does not much concern them; the benefit is what does," he believes that the possession of explanation helps make problems known and thus more manageable, although not thereby necessarily less upsetting [33].

Last's paper seems to me to have particular importance in two directions. First, it immediately brings to

mind that other well-known expression of the reason why we should not see coherence as a sufficient goal, namely Robin Horton's observation of how mounting intensity during affliction, as in other situations in life, causes recourse to be made first to common sense—without explanation, just doing—but increasingly towards theory which explains [34]. It has already appeared by proxy in Dr Gilles' observations about the spectrum of disease. Lewis's observations, just cited, fit Horton's idea quite neatly. But is Last's argument to hold for situations of low intensity only or across the spectrum? Clearly in his opinion, it is the latter; so then we see a radical departure from Horton's view.

In another direction, Last's paper serves most usefully to etch the polarity between the Greater and Lesser systematisers. He would like to propose that the logic of the quest for therapy is not necessarily a topic of high priority. It achieves that status in a scheme of research oriented towards substantive knowledge, and if 'switching codes' is in fact less important a subject than 'switching off', then clearly, a lot of the intellectual force directed towards unravelling that logic is misspent. This is to go a long step beyond the criticism now routinely made of Robin Horton's other major premiss (that traditional cultures, lacking awareness of alternatives, are "closed" compared to "open" scientific cultures), for whereas others may point to the "closedness" present in scientific cultures and vice versa, Last now asks us to see that debate as irrelevant. A similar note of scepticism about the purpose of seeking conceptual coherence, in this case "theoretical closure in the face of apparent open-endedness of the data on medical and health systems in a 'pluralistic' framework" [35] is sounded in Young's paper. The burning questions here seem to be familiar, but given new urgency. How little conceptual apparatus can we be content with: where is the watershed between the stream of coherence and the stream of local accuracy? Can systematic descriptions using criteria of normative well-being coexist with case studies that move, showing us the fabric of a pluralist context? When we use such criteria, in what ways can we convince our readers: what constitutes adequate proof? Beyond these academic questions lie practical ones. Once a convincing explanation of cause and/or quest has been made by the anthropologist, what use is it? If, as I suggested earlier might be the case, medical planning for Africa cannot embrace taxonomically different therapies other than incidentally if such planning is to be effective, so that in a situation of medical pluralism consumer choice alone determines the texture of that situation, then the planner can only respond to such knowledge. So, should he respond actively, giving the traditional healer who has now been identified a status and salary? "To legitimize traditional medicine would be to condemn thousands of epileptics in Uganda to a life of disgrace with 'spoilt brains'—while relative normality lies just a bus ride and a packet of pills away" [36] is Weisz's view. Can that be countered? In his paper Mudimbe shares some of Weisz's fears. When the insane are cauterised, these are burning questions indeed.

The vital indigenous skill which is observed both in Gilbert Lewis's synchronic description of a causal logic in New Guinea, and in John Janzen's diachronic

explanation of the 'therapy managers' of Kongo patients is the same. In Lewis's words it is "their skill at meeting expectations and at providing social and psychological support and care during illness" [33, p. 237]. Kindness cannot be institutionalised. Is that all that anthropologists can usefully say to sympathetic practitioners like Maurice King?

HISTORY'S QUESTIONS

Concern about utility has not much affected the work of historians in dialogue with practitioners. Epidemiological history, providing data for an autonomous description of the disease environment, shared the conceptual currency of reductive diagnosis and a negative illness derived criterion of health. One could mark a progression beginning with Hans Zinsser's idiosyncratic 'biography' of typhus in 1935, to Dubos' *The White Plague: Tuberculosis, Man and Society* in 1952, to Rosenberg's *The Cholera Years* in 1962. Then in the 1970s, Anglophone historians began to combine the wider conceptions of disease as an active agent in history, to be seen in the thinking of the *Annales* school, with their empiricist clay—an endeavour in which Dubos had already shown the way—and a powerful ecological interpretation of very wide historical events was seen in works like Crosby's *The Columbian Exchange* in 1972, about that most dramatic of all ecological invasions, of Latin America by Europe, and, more expansively yet, W. H. McNeill's *Plagues and Peoples* in 1975 [37–42].

A similar progression can be seen in the African historiography. In the late 1960s Hughes and Hunter surveyed the epidemiological literature and observed how, being conceived with the negative illness definition, it connected little with the study of social change. Taking yet another book by Dubos, *Man Adapting*, as their text, they argued that change, especially "development" change might be *predispositional* to disease and, citing Dubos, they said that "the real problem, therefore, is not how to maintain the balance of nature, but rather how to change it in such a manner that the overall result is favourable to the human species" [43, 44]. This insight made the study of disease available to historians as a precise way of explaining cultural and material change which had peculiar force and elegance. Hughes and Hunter coined the ungainly name 'developo-genic' disease to describe "those pathological conditions which can realistically be interpreted as (usually unanticipated) consequences of the implementation of developmental schemes" [43, p. 481]. They compared the importance of their idea with that which the concept of iatrogenic disease was having for doctors. 'Developo-genic' and earlier 'colonio-genic' explanation of disease patterns is now widely used.

The nature of historical writing means that there is frequently a considerable time lag before new ideas seep into the received wisdom. The idea, as expressed by Hughes and Hunter, that disease might be shown to be the result of unintended actions, even of actions intended to eradicate that disease, entered African history most importantly in the late John Ford's seminal work, *The Role of the Trypanosomiases in African*

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Ecology [45, 46] in 1971. At that time, the ship of African history was bowling along, close hauled, in a stiff breeze, on a course of agricultural history. At one stage it had seemed that this was the best way in which to illuminate the lives, especially during the colonial era, of the ordinary people, and their rulers, who had been so contemptuously ignored by imperial historians. But agricultural history in the 1970s proved to be both too easy and too hard: too easy to give a comforting picture of coherence from thin data; too hard to find thick data from the archival resources to which historians traditionally went. So one saw some historians put on their gumboots and go out to get this hard, thick field data; others retreat from the more expansive explanatory claims to be content with descriptions of changing patterns of agriculture especially of cash-crop agriculture from accustomed sources, inferring people's reasons from that [47-50].

Two obstacles dictated changes in course. One was the need for a new and more efficient organising principle for cultural history than agricultural change; the other, a growing unease, akin to that which anthropologists seemed to be feeling, about the standards of method and evidence required to convince readers of explanations of motive.

The first change of course has been made with the publication in 1979 of John Iliffe's *A Modern History of Tanganyika*. This is the first major occasion that the full implications of John Ford's work have been appreciated, digested and then put to work by an historian:

A central theme of Tanganyika's history has been its people's colonisation of the land and their struggle with their enemies in nature... the colonisation of their immensely difficult continent has been the African people's chief contribution to human history and one of the great adventures of man's past. Only recently have historians of Africa begun to understand this, and as yet they have scarcely begun to relate the story of colonisation to other aspects of Africa's past. To do so in one country is a central purpose of this book. It is an attempt to show how relationships between men and nature in modern Tanganyika have intertwined with relationships between men and men [15].

Although Iliffe's work is the first comprehensive exposition of Ford's ideas, it is not alone. Marc Dawson's article about smallpox in Kenya and David Patterson's about public health in Accra, both given in Baltimore, exemplify a now vigorous trend to discount the seeming objectivity of Gelfand's type of medical history, substituting an interpretation of medical actions much more closely coordinated with other aspects of intended colonial policy or unintended colonial actions. This view is forcefully put in Hartwig and Patterson's introduction to the recent collection *Disease in African History* [52-54] and bulks large in Section IV below. Indeed, the debunking of Gelfandian views of medical policy is rather popular at the moment, although articles like Patterson's, which shows how relatively healthy Accra was due to its safe, piped water supply, in comparison to the hinterland, stand to indicate that the prevailing gloom about colonial disease creation is not unrelieved.

However, although the ship may now have been

put about onto another tack, that alone is not enough. A burning question remains which relates to intellectual history. The adoption of the ecological perspective does not require any serious conceptual adjustments, provided that the historian does not engage the small scale upon which individuals act. But when he does—as he is obliged to do if he is to show that his larger abstractions have substance—he encounters another of the themes which have grown during the 1970s in African history: a creeping doubt about simple methodological propositions which had previously been taken to link data to analysis quite adequately.

This doubt was given voice in the mid-1970s in David Henige's polemic about the possible and actual misuse of oral data in the search for chronological exactitude. The lesson in that context was that one ignored the circumstances in which information was given at one's peril—"history as present politics"—as one of his chapter headings put it [55]. The message would hardly surprise anthropologists. Aware of this invention of tradition, historians began to look anxiously around. What could one take at face value? For me, one of the lessons of the last few years has been that very little can be taken at face value. It is here, as the fabric of intellectual history written without this scepticism fades before our eyes, that the study of African therapeutic behaviour offers a new prospect.

We now have a slowly accumulating, but still small, body of work showing us how, where and why traditions are manipulated. King lists, formal accounts of 'traditional' political organization, explanations of religious actions, of religious organizations in cults, are reopened to scrutiny. Donald Levine explained that a central motif in Amharic culture was *sam-ennā warq*: "wax and gold". "The apparent figurative meaning of the words (in verse) is called 'wax'; their more or less hidden significance is the 'gold'... As one of my Ethiopian colleagues has said, 'wax and gold is anything but a formula—it is a way of life'" [56]. This sort of insight bulks ever larger in the preoccupations of those who try to write African history. What is to be done?

It was precisely this sort of scepticism which led to my first serious interest in therapeutics. Obviously, the best solution is a new sort of historiography, akin to *l'histoire totale* of the *Annales* School, wherein narrative and description can follow Feierman's second rule and engage in prolonged interaction, in this way testing each other and offering the results of such testing to the reader as reasonable proof of the veracity of both. But if, for any reason, that cannot be, a study of therapeutics may be one of the best—because most defensible—first steps. If agriculture was the organising principle of African history in the balmier 1970s, I think that affliction and its relief could be a sufficiently hardy successor for the more forbidding weather ahead. It qualifies in this way because the relief of affliction belongs to a small, select group among phenomena available for observation of which others are the analysis of language and the study of how small children are educated. I believe that we may reasonably make an assumption about them which defends us from the icy blast of scepticism about manipulation of data. In my outline of Lozi

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therapeutic in relation to the relief of affliction, I put it thus:

...Because people everywhere are concerned about affliction once it is perceived and seek to be rid of it, and because, as the perceived level of affliction rises, this can rapidly become a preoccupation overriding all others... recourse is made to what is most reliable in the quest for remedy. The perception of reliability changes over time as the case history progresses and thus... gives us a map of the core and peripheral areas of the entire cultural environment. This offers a valuable specific pathway into intellectual history because of the simplicity of this assumption [2, p. 286].

It is also valuable firstly because large amounts of recoverable data can probably be found, as the case studies below reveal, secondly because such data can better withstand the calloused grip of crude materialist explanations to which agricultural and 'peasant' studies may all too easily succumb.

If the study of disease and therapy is to occupy this organising role with success, three demands are placed upon it. There is the search for reliable depiction of the nodes of culture; this is approached through the theory of disease and therapy. There is need for an environment in which to study colonial encounters; this is approached through a history of medical pluralism. There is need for evidence of the unintended consequences of change; this is found when the ecological perspective of John Ford is applied. In this way we have moved from our smaller and older to our newer and larger three-legged metaphorical cooking pot.

CONSEQUENCE

As I observed at the outset, the new tripartite division of the field blurs the differences between the terrains of the contributing expertises, but this is not simply a result of the present confusions in African history. The issues which light up medicine and anthropology tend also, by their nature, towards convergence: the uneasy relationship of Hygeia and Asclepius, the future of specific aetiology, which seems curiously less certain in the rich than in the poor world; the utility of autonomous definition of disease, the compatibility of 'quest' and 'cause' analyses, the problems of the greater and lesser systematisers; the vexatious question of adequate proof and the retreat from our grasp of cultural and intellectual history in Africa. In such a climate of introspection and doubt, and with such a catalogue at the end of our investigation, I can scarcely hope to match Lenin's brave certainty at the end of his. "What is to be done?", he asked rhetorically. March boldly towards the revolution! Perhaps we might edge gingerly forward?

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THE NEED FOR A TAXONOMY OF HEALTH IN THE STUDY OF AFRICAN THERAPEUTICS

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Abstract—Most medical ethnographies in Africa have focused on notions and taxonomies of disease, their causes and the therapies available to treat them. This 'negative' pathology-oriented perspective misses, or underplays, important although often unlabelled practices and ideas of hygiene, adaptation to the environment, normative health, and the conscious maintenance of health ideals, all of which are increasingly important in planning health programs based on popular support and rooted in cultural values. It is argued in the paper that medical anthropology needs to consider, as a single domain, both disease and health, both taxonomies of disease and of health, and the study of this expanded domain. In order to more adequately identify and analyze such an expanded domain, the paper reviews numerous ethnographic works on medicine and health in Africa—including Heinz on the !Koi, Evans-Pritchard on the Azande, Buxton on the Mandari, Ngubane on the Nyuswa-Zulu, and Janzen on the Kongo—exploring their potential for understanding alternative logics in therapeutics and for explaining sources of change in medical and health thought.

Death never takes a holiday.
Paracelsus [1]

Death is a possible outcome not
only of every sickness, but also of
every "utopia of absolute health".
Oskar Köhler [1, p. 621]

These sobering epithets in a recent essay by Köhler on "The Utopia of Absolute Health" offer a correcting perspective at the outset to assure those who fear I shall try to solve the impossible. This paper is an experiment in which I shall explore the reasons for, and possibilities of, studying African therapeutics not from the conventional standpoint of disease—perceived, classified and treated—but from the standpoint of coherent health concepts and practices, from which sickness is a departure and treatment an attempted return. According to Köhler nowhere more than in our bodies do we experience the chaos of history, our own mortality. Yet in every society and at every level of cultural development 'health utopias' have emerged squarely within this ultimately losing struggle with mortality; not fantastic utopias, but working culturally-specific utopias as real as concepts of disease. All therapeutic systems possess such utopias of absolute health. To lose sight of them constitutes a crisis for the therapeutic order, as well as for scholarship of that therapeutic order which seeks to understand it [1, pp. 619–621].

Disease-oriented study has predominated in anthropological and related research on African therapeutics, as any cursory review of recent bibliographies on the subject will indicate [2, 3]. This may be due to the influence on Western anthropology of Allopathic medicine which is oriented to combating pathologies one by one in a relatively atomistic manner. Allopathic medicine's 'utopia of health' is only vague at best. It may also be due to the fact that early students of comparative therapeutics were all physician-ethnologists such as Rivers and Ackerknecht. They compared indigenous medicine with their own, and found it 'magical' by comparison. An interest was usually

given the indigenous pharmacopoeia, but it was concluded that although extensive, the containing some powerful agents, it was mostly aimed at 'symbolic' ends. With some notable exceptions, indigenous medicine has in ethnological work rarely been studied in relation to a health system; it has usually been looked at in relation to magic, ritual religion and psychotherapy [4, 5].

Simple logic suggests that a complete look at African therapeutics, or whatever we wish to call it, requires the health perspective. Since Kant, the identity of a domain has consisted in defining its 'antinomy' as well; for every 'A' there must be a 'non-A', the two encompassing the larger definitional category [6]. Therapeutics must thus include not only the negative side of disease classifications and causes, but also the positive side of treatments and underlying concepts and behaviors of health. Durkheim carried this perspective into a modern sociological view of society when he studied the 'normal' in terms of the 'abnormal', the former visible in positive sanctions as well as negative sanctions surrounding the latter.

My own work through *The Quest for Therapy in Lower Zaire* has followed the Allopathic ethnologic approach to studying African therapeutics [7]. Gradually I have come to believe that this model does injustice to some major dimensions of African medicine and health. In particular, work on major corporate healing and health-maintaining orders—the "drums of affliction" of Bantu-speaking Africa—has led me to a different understanding of the fully developed therapeutic institutions of the past.

...one gets the picture not of a society indulging in its weaknesses, sicknesses, miseries and woes, but of a society that has, at least historically, known how to construct functionally-specific as well as more general institutions to overcome philosophical, social, and perhaps ecological threats...verbal categories [in a Lemba-related text from Lower Zaire] appear which characterize properties of a system of wholeness: purity, order, access to spiritual energy, clarity, redemption, social alliances, and more [8, 9].

More recently, in preparing a short monograph on 'health development' for an international service agency [10], it has become clear that the financial and moral crisis in the movement to extend the curative medical model to all societies of the earth, and the engagement of agencies such as *Medicus Mundi* and the World Health Organization in the Primary Health Care movement, as well as the rising interest in indigenous medicine, requires groups such as that gathered here to urgently assess issues such as (1) what leading questions we wish to ask, (2) what conceptual models we must use, and (3) whom we hope to influence. For these reasons, there is a need for a taxonomy of health in the study of African therapeutics.

HEALTH IN THE KALAHARI

In establishing an adequate framework for the study of therapeutics, as suggested in foregoing paragraphs, two tasks become apparent: first, to establish the valence and range of the cultural taxonomy, that is its health and/or disease orientation and items within this distribution—e.g. verbal categories, attitudes, practices, consequences; second, to understand the ideas of causality or of association which combine these elements, with an emphasis on how health is maintained and, when it is perceived to break down, how practices intervene to restore it. The most far-reaching implication of such an approach is that 'health' will not be as readily, nor as succinctly, definable as 'disease'. And, where we must look for particular practices and 'utopias of health', within single societies, we will encounter multiple etiologies of health. This apparent hindrance turns out, as we shall see later, to be an advantage.

The following review of a health system is based on a recent lengthy article, "Hygienic Attitudes and Practices of the !Ko Bushmen", by H. J. Heinz [11]: a fitting case, for the !Ko have a very meagre medical system although they have remained healthy enough to survive well for millennia. How and why? When he wrote his report on Bushman hygienic attitudes and practices in 1975, Heinz, a German physician *without* ethnological training, had had twelve years of field-clinical experience in Western Botswana and knew the !Ko language well. Although the !Ko have been under influence from non-Bushmen for centuries, and are increasingly drawn into contact with ranchers, government officials, and townsmen, their core health practices and attitudes are clearly evident, as are those areas of their greatest vulnerability.

Heinz is reluctant to offer causal explanations for particular hygienic practices by the !Ko because so frequently they had no explicit answers to questions about their practices. Yet he offers that one may account for personal hygiene in terms such as (1) personal disposition, which varies as greatly among the !Ko as in modern industrial society, (2) the availability of the wherewithal to practice personal hygiene and cleanliness, which varies according to (3) seasonal factors, (4) the age, and (5) sex of an individual, and (6) the degree and kind of influence from other sedentary agricultural Bushmen, other Tswana, and an occasional European such as himself [11, pp. 99–107].

Contrasting to 'personal' hygiene is 'environmental'

hygiene, that is hygiene of the immediate human settlement, the living area and the band hunting region, and within these, food hygiene and storage, standards of edibility and preparation, water hygiene and the handling of excreta. Heinz also includes under this rubric widely-held communal attitudes about sleeping, sharing of food and water, utensils and clothes, as well as about disposal of the dead and protection against disease [11, pp. 108–156].

It is not possible to enumerate here more than a few examples of the many hygienic practices and attitudes mentioned by Heinz. Personal hygiene varies enormously from those !Ko who rather seriously ignore their appearance and cleanliness, much to others' displeasure, to those who are fastidious and told Heinz extensively why and how they maintain their cleanliness. In general, bodily care is greatest among sexually active adults, who also lavish time and attention on cosmetics. Self-neglect is most common among pre-pubescent adolescents and the very old. Mothers are concerned with the cleanliness and health of their children, as is seen in the way they clean up their infants' excreta in the living area and the way their food is kept away from those with open sores and pus discharges.

!Ko hygiene obviously must depend on what limited means Kalahari desert dwellers have to wash themselves. In the dry season water is extremely scarce, so a variety of substitutes are used, such as the mixture of the roasted, stamped *tsama* melon seed and saliva and oils which are rubbed on the skin to clean it and keep it healthy. Heinz describes how he learned to use the Bushman technique of effectively bathing with one cup of water! In rainy season when water is more abundant, full bath techniques become the rule, either at water pans or ranch stock watering tanks. Soap, when available, is enormously appreciated, and is used to wash the body and Western clothing. Traditional leather garments, which collect and carry fewer disease-bearing organisms than European fabric garments are oiled to keep them soft, but otherwise are never cleaned. Utensils are washed quite regularly with ash and sand, but unclean utensils are not a serious problem since foods are cooked thoroughly or, like meats, roasted and dried.

Given the small amount of fresh water and the infrequency of cleaning clothes, other important factors of health, according to Heinz, are the relative isolation of each band, the sparseness of habitation, and the extreme dryness of the Kalahari. If a settlement becomes too dirty due to refuse or feces, it is moved to a new clean site. The dead are buried where they die and, since these sites are never visited, they do not become centers of population. Water pans, which are in some sense centers in Bushmen spatial orientation, do not often become conveyors of disease-bearing organisms since there are few other human transmitters of disease than the band at a water hole, and those animals which frequent the holes do not introduce human diseases. The Bushmen thus use water that may be brackish and dirty, if necessary, because they know it does not make them sick. The extreme dryness of the environment means there are few parasites around; the !Ko have no intestinal parasites. Lice and sometimes flies are their only pests.

Within their camps they however take pains to avoid contact with those of their membership visibly infected with open sores or ailments. These individuals are given separate utensils, and they are kept away from children. Heinz mentions a case in which a father forbade his daughter from marrying a sick man. Bushmen are extremely prudish about matters sexual: touching a spouse's genitalia is believed to lead to sickness.

Heinz suggests that although the !Ko do not have etiologies—explicit causal theories—about these hygienic practices and the 'diseases' they avoid, their knowledge of the body and related health matters is extensive and matter of fact, far more developed than their medical practices. It is apparent that their health and hygiene practices are followed because they deduce certain consequences from certain practices. Why else, asks Heinz, would they not allow a person with an open sore to fetch their water? The relative absence of medical practices, Heinz believes, is due to the extreme environment, in which the air is exceedingly dry most of the year, and the sun pours forth an "intense bacteriacidal ultraviolet radiation" [11, p. 160]. There is a relative absence of sepsis in minor abrasions and even major injuries. Because of the small population concentrations, reservoirs of pathogenic organisms are almost non-existent. All in all, Bushmen health practices, however repulsive to an outsider, have functioned adequately.

This is why, Heinz suggests, the attitude toward disease, when it occurs, is one of nearly complete fatalism. "The course of life is laid out by God (*Cu/e*). Any form of disablement or disfigurement due to whatever natural causes, including illness or disease, and even infertility, are accepted as the will of God" [11, p. 107]. Missing from !Ko etiologies are the elaborate ideas of agricultural and town societies in Africa which include social causation such as witchcraft, sorcery, pollution, and attacks by ancestral shades.

The only active protection sought against disease comes in applying prophylactic ritual medicines in the presence of strangers, and in shamanistic dances to ward off vaguely-defined evil spirits. These curative practices, and the more fully developed, well-adapted range of matter-of-fact hygienic practices, are however, tragically, of little help when Bushmen come into extensive contact with pathogen-bearing outsiders from Euro-African society, or when they themselves move to sedentary life around cattle ranches or fields. Fly-borne disease become serious problems in Bushmen camps around cattle ranches, some being developed by Bushmen themselves. Brief exposure to outsiders in the past has introduced smallpox and measles, which have flared at various times into epidemics and disappeared. Only TB of the external diseases has remained a constant problem, and it is individuals infected with this—as open sores—which they quarantine in their camps. As Bushmen enter into more active contact with the national Tswana society, they become susceptible to all the dangers to health known in other African societies of larger scale and frequent long-range contact.

It is likely that the Bushmen and other Khoisan-speaking peoples were able to survive the spread of agricultural peoples with iron-working into their

areas only by withdrawing into a zone like the Kalahari (only here is where they really did survive). Thus, the Neolithic revolution in Africa, wherever we have good evidence of its occurrence, may well have been a transition of extensive disease and populational dislocation, as social and technological changes occurred which spawned greater population concentrations than hunting and gathering bands, and as these concentrations became sedentary. The case of malaria, and of sickle-cell anemia, is but a chapter in this story. Thanks to such work as Patterson and Hartwig's *Disease in African History* [12] we are beginning to see the profile of African history in terms of long eras of relative ecological stability interrupted by short transitional periods of severe epidemic disease.

In addition to the Neolithic transition, the beginning of colonialism was probably another such period of disease, when new concentrations of population were formed, and long-distance movements of people exposed large areas to European diseases that disrupted the adaptive relationship that had existed in African agricultural societies. With good reason the era 1890–1930 has been called the worst disease era in African history [12]. However, research and writing on long-term periods of ecological stability are still in their infancy. Some writing is being done on histories of disease outbreaks in terms of underlying adaptive models. Even rarer are studies which combine the bio-ecological conditions of life with 'native models' of long-term adaptive survival.

Although studies of particular diseases and how people cope with them are needed to build up a profile of a social adaptation, such studies do not offer the long-term view. It is important, in setting out to study the combined health picture of concepts and practices that we realize there is a high degree of specificity in the determinants for such an order, as we have seen in the Bushman case, including: the environmental niche in which a society lives; the corresponding manner with which people make a livelihood, including their 'technological kit'; the demographic factor, i.e. whether they live in small or large concentrations, isolated in frequent contact over long distances with other populations; social organization and behavior patterns; and their understanding of their life situation in practical terms as well as in their religious or world view.

A further point I wish to draw from the Bushman study and the incidental remarks about the agricultural societies and the early colonial order, is that these long-term systems of health—behavioral and conceptual dimensions—require decades, perhaps even centuries, to reach a level of effective integration. This point may be in evidence when population begins to rise again after a decline has set in due to the disruption of a previous health system. Reasons for such a leveling of mortality rates or increases in population tend to have more to do with the broad, multi-factored health structure than with medical practices. This is true, as seen, in the Bushman case. It is also true in the rise of population in West African cities early in this century before the advent of miracle drugs. Clean water and better sewage, argues Patterson [13] were the significant factors of the real population increase in Accra, Ghana during this period.

A final point I wish to make here is that much

work remains to be done in drawing out the right combination of theoretical links between the various factors we have identified as crucial in the stable, long-term human order: environmental, demographic, social, historical, conceptual, technical. It is, in any case, a picture of considerably greater causal pluralism than is that of a medical system, which is, by contrast, very narrow. But then to identify the salient factors of health is more important.

Having emphasized the multiple causes of 'health' in the study of African therapeutics, is anything to be gleaned from the classics on African therapeutics, done in the 'disease and cure' genre?

RECONSIDERING DISEASE CAUSALITY

We may as well begin the inquiry of multiple causality in African thought with Evans-Pritchard's *Witchcraft, Oracles and Magic among the Azande* [14] because that is where all such discussions lead sooner or later. Most scholars in anthropology, philosophy, and comparative medicine think they are experts on the behavior of Azande granaries and witches. Yet, in rereading the book for the present paper I was struck with the extent it has been selectively used and reprinted to describe African witchcraft only, passing by lengthy sections and serious considerations of other types of causation, in particular that which Evans-Pritchard calls "natural" causation. Although there is some inconsistency in his use of the term "natural", at one point or another in the book it refers singly or together to a wide assortment of suspected causes of misfortune and disease, including: lack of common sense, personal irresponsibility such as lying, adultery, stealing, deceiving authorities, murder, broken taboos such as incest, sorcery, breach of blood brotherhood, and the remote work of God [14, pp. 75, 77].

Going further, Evans-Pritchard has much to say about how Azande relate these "natural"—anyway non-witchcraft—causes to witchcraft. They do not neglect the 'secondary causes' even when they attribute a misfortune or condition to witchcraft. Rather, they 'foreshorten' causal chains of events, selecting the cause that is socially relevant and neglecting the rest. Witchcraft is frequently selected out of a number of cooperating causes because it is the ideological pivot around which swings lengthy social procedures from death to vengeance which the Azande happened to believe important in the thirties. (Let us not forget that they were in a time of early to mid-colonial upheaval when Evans-Pritchard studied them. Their monarchical government had been destroyed and the king deposed only decades earlier.) To attribute misfortune to witchcraft does not exclude the 'real' cause; it is merely superimposed on them and gives social events their moral value. The two—witchcraft and natural causes—are not mutually exclusive, although the Azande would no more confuse witchcraft with natural cause than we would confuse the scientific theory of disease or misfortune with its explanation by crime or sin [14, p. 75].

According to Evans-Pritchard, Azande then combine causes in explanation and decision-making in the following three ways. (1) Misfortune or another condition may be caused by a natural cause which is in

turn directed or precipitated by witchcraft. The natural cause is then an intervening cause in a chain of events. (2) Misfortune or another condition may be caused by several causes working equally directly and simultaneously, including witchcraft, broken taboos, natural causes, and the like. (3) Misfortune or other conditions may be explained in a scheme in which witchcraft is contrasted to 'natural' causes, in which they are set apart as alternatives needing to be analyzed or deciphered. (Fig. 1 illustrates these modes graphically).

Azande medicine, as well as judicial procedures and magic, tends to follow these types of causal arrangements. Simple illnesses, for example skin ulcers, may be treated symptomatically without pursuing a fuller diagnosis of an 'ultimate' cause [14, pp. 509-510]. Dual therapy may be pursued, with symptomatic treatment of the illness as well as oracular action to interpret the mystical cause working upon the disease (as a natural entity). This may be done in alternative and independent courses of action, or in coordinated action which reflects the intervening links in the causal chain leading back from treatment of symptoms to the disease and to the ultimate mystical cause.

This mixture of natural and mystical causes, and of 'empirical' and 'magical' therapies is explained not by a discernment of the differing techniques which we distinguish in our analytic models, suggests Evans-Pritchard. There is no doctrine of natural cause comparable to European natural law [14, p. 81]. Azande natural occurrences seem to be those which just happen due to the nature of things, and for which there are no other etiological patterns. Selection of one type of treatment or another is based, rather, on the inclination to scale sicknesses and the stages of a misfortune in terms of the degree of benignity or seriousness. The more serious, and threatening to individual and community, the greater the need to take up broad-ranging causes which express the hidden forces of life. Since this determination is made in particular situations, with given social compositions, it may often

(1) Intervening Causal Chain

Witchcraft ⇒ Natural cause ⇒ Misfortune

(2) Multiple Simultaneous Cause

Broken taboo ⇒
Other natural causes ⇒ Misfortune
Witchcraft ⇒

(3) Alternative Causes

Witchcraft ⇒
Either, or ⇒ Misfortune
Natural causes ⇒

Fig. 1. Models of multiple causation in Evans-Pritchard's Azande study.

entail 'dual causation' [14, p. 507] and multiple interventions in the manner of possibilities described earlier.

Azande perception of European medicine of the thirties followed this scheme. European doctors were viewed with suspicion because they were thought to bring to the Azande the very diseases they claimed to cure—sleeping sickness, smallpox, etc. Their medicines were viewed as appropriate for benign, simple afflictions and not at all fitting for more serious causes.

In sum, Evans-Pritchard's account of Azande causality and classification shows it not to be pervaded by the single cause of witchcraft, but based on multiple causal modes and combinations applied to events situationally, using a hierarchy of resort ranging from simple to serious, with recourse first to 'empirical' and then to 'magical' intervention, as the case requires.

Subsequent studies of African medical and health systems which consider indigenous concepts and practices and criteria for explanation and decision, may be divided between those which single-mindedly emphasize the witchcraft logic in Evans-Pritchard's work and those which read it as I have done with an emphasis on multiple causality. The former tend to see African therapeutics as a 'closed system', the latter, who are still in the small but growing minority, see it as some variation of an open system, amenable to change at one or another level, and to the accommodation of therapeutic pluralism. Next to Evans-Pritchard's work, Horton's seminal essay on "African Traditional Thought and Western Science" [15] has provoked the most discussion and citation, so it deserves review next, as we look for models appropriate to the requirements of a multi-causal health or healing system.

Horton has much of value to say in Part I of his essay on similarities between Western science and traditional African thought (although one may question the logical propriety of comparing 'science' in one society to 'religion' in another). My criticism of Horton becomes most strong in Part II where he identifies what he believes are the 'closed system' features of African causality, especially of disease and misfortune. Based in part on Evans-Pritchard's work, he characterizes African traditional thought by the use of a pattern of "converging causal sequences" [15, pp. 169–170] in which not only are several causes held to be responsible for a single effect, but in which causes can be picked up and abandoned if scrutiny or therapeutic experience proves them to be uninvolved. The fundamental difference between this and Western science lies in the manner that causal imputations if proven false may be shifted or altered, making the system infinitely self-validating. Science by contrast seeks to test or confirm every causal nexus, and if one is demonstrated by careful screening of variables to be invalid, it is permanently relegated to the trash heap of outmoded theories and is replaced by other hypotheses. African traditional thought, says Horton, because of its self-correcting infinitely-varying range of etiologies, remains essentially a conservative self-protecting set of beliefs.

Where Horton errs in characterizing African thought's "converging causal sequences" is in identifying the alternative causes of a condition as mystical

properties of the same order—usually spirits or witchcraft—between which diviners, or whoever, select alternatives which are convincing. As we have seen from a close rereading of Evans-Pritchard's Azande work, the alternative causes of misfortune are not all of the same order, nor are they all tied up in unverifiable mystical systems. They range, as we have seen, from witchcraft to issues of social breach to vague acts of God to 'simply happening', the latter receiving from Evans-Pritchard the gloss of "natural" causes.

Because Horton fails to identify in sufficient accuracy and detail the differing orders of causes in (Azande and other) African thought systems, he is incapable of seeing the source of diversity and of change in the categories of African therapeutics, whether disease oriented or, especially, health oriented. In short, he misses those points at which African systems of therapeutics are 'open' and the way in which they are open. A number of recent original field studies show these areas which permit innovation, change, and experimentation.

Buxton's *Religion and Healing in Mandari* [16], a classic by any standard, argues for recognition of a greater degree of "openness" in the interpretation of African therapeutic systems. Mandari doctors, even more than laymen, have an attitude of uncertainty toward the validity of their cures. They acknowledge that some parts of European medicine are especially suited for Europeans, and that some elements of this medicine, such as surgery and other empirical techniques are superior to their own, although they still prefer their own. Beyond believing that a certain degree of cultural specialization of medicine is needed to meet the specialized illnesses of various peoples, they recognize a common human element in all medicine.

Buxton denies that the so-called 'safety valves' against doubting the system— inept doctor, refusal of a spirit, misdiagnosis, or leaving everything up to the Creator—constitute an absolute barrier against change in theory and practice [16, pp. 325–361]. Internal as well as external modification is a possibility. The philosophy on which rests Mandari medicine has certain basic assumptions which however, do not constitute a tight unified whole. It has a number of symbolic centers, inner cores with a high degree of stability. Change of the core is very slow, and there is emotional resistance to it. However, on the periphery, new ideas and practices are adopted, checked, confirmed or rejected. Continuing attachment to symbolic centers can well be combined with acceptance on the periphery of revised extraneous elements, even including a gradual widening of the recognition of empirical causation. Folk medicine and scientific medicine then begin to exist side by side. Although the Mandari do not automatically incorporate new evidence to affect theory, they show flexibility and willingness to examine it. In many ways, then, Mandari medicine in theory and practice shows itself more capable of modifying accepted dogmas than has been supposed, and perhaps more capable than has been the case with some Western theories and practices [16, p. 327].

The combined concerns for understanding the diversity of etiologies in African therapeutics, and interpreting its open, changing structure, as empha-

sized by Buxton, have appeared in numerous studies on the subject in the last decade. The existence of a simple causal duality which distinguishes human-caused or related conditions from 'natural' or God-caused and related conditions, has been reported now from the southern Savannah of Africa by Turner [17], Prins [18] and others, from East Africa by Orley [19], Swantz [20] and Feierman [21], from Southern Africa by Ngubane [22], from the Western Equatorial region by Janzen [7, pp. 44-49, 67-74], and from West Africa by Gilles [23] and others. It is likely that this diagnostic and causal dichotomy has been a fundamental part of African therapeutics for a long time; indeed, it is reported in 19th century accounts prior to the advent of modern medicine in Africa [24, 25]. It is also probable that in most parts of Africa where such a dichotomy has been found, that European biomedicine has been accommodated on the side of 'natural', God-related, phenomena which respond to symptomatic visible treatments and causes.

Changes in African classification structures at large, other than the accommodation of 'natural' biomedicine, are not so clearly understandable from the literature. Nor is it apparent exactly how one might make the bridge to the 'health' perspective I have recommended earlier. These questions will be taken up next based on Ngubane's Zulu "ethnography of health" and my own work on Kongo medicine.

THE MEDICINE/HEALTH CONTINUUM

The first of these two questions, how one moves from the causal and taxonomic diversity recognized above to a better appreciation of the health view, is clarified in Ngubane's work on the Nyuswa-Zulu, which she sub-titles "an ethnography of health". The above-mentioned widespread dichotomy between natural and human conditions is, in Zulu thought, expressed as the difference between *umkhuhlane*, natural afflictions which 'just happen', and *ukufa kwabantu*, afflictions of people [22, pp. 22-24]. This distinction seems to form the basis for a nuanced view of the relationship people have toward one another, and toward the natural and 'supernatural' realms. These relationships must be kept harmonious, or in balance (*lungisa*), or restored to balance (*ukuzilungisa*) to avert dangerous 'tracks' (*umkhondo emibi*) from affecting individuals, especially the more vulnerable ones such as children and strangers [22, pp. 24-29]. The key notion behind Zulu health is thus 'balance' (*lungisa*), and although it is more highly developed as an ideology in the area of human relationships (*kwa bantu*), it also applies to the forces of nature and of spirits, and the relationship humans have with these latter. The attainment of harmony in this fuller sense entails many angles; health is multicausal.

Given the rich literature on African social systems, it is easier to understand what such 'harmony' might mean in terms of rituals of renewal, purification, and blessing, and in court processes to re-establish justice, than in establishing harmony between humans and nature. Ngubane reviews some of Gluckman's work on rites of kingship renewal in Zulu and Swazi society, emphasizing that 'criticism' of the king has not so much to do with social oppression as with removal of the pollution that has accumulated in the

previous year in the collectivity. This is very convincing. It suggests that the prevailing Zulu notion of health is very much like the Christian concept of 'grace', or like another African ideal, 'coolness'. However, Ngubane's case studies on sorcery and ancestor-provoked afflictions demonstrate that conditions in South African society hardly permit these beautiful ideas to reach concrete embodiment in the lives of all people, and that there is a significant gap between the 'utopia' of Zulu health and the reality of individual lives—a common occurrence, as we have seen, in health utopias. Later in this volume Ngubane explores the role of Zulu divination in mitigating this gap.

In Kongo society of Western Zaire, concepts, verbal categories, and health and healing processes are very similar to those in the Zulu case described by Ngubane. I believe that I can articulate the issues of health taxonomies better with Kongo material, which I shall review briefly. Given the historical record of Kongo society, it is also possible to say more about areas of change in these taxonomies.

The Kongo, too, distinguish between afflictions and conditions of natural origin, 'caused by God' (*kia Nzambi*), and those of human complexion, (*kia muntu*). Although this distinction is frequently heard as such in diagnostic discussions among kinsmen, and in the séances of prophetic-diviners, a host of euphemisms articulate a wide range of etiologies between these two possibilities: personal disregard for health and diet; disregard for social etiquette and society's rules; spirit-related causes such as the wrath of ancestors, or water spirits, or the spirits of twins. As in Zulu, an aura of pollutedness usually accompanies sickness attributed to "human cause", requiring the sufferer and his kin to seek purification through sacrifices, confessions and gift exchanges to achieve reintegration to, or equilibrium in, the community of lineage, village, or town. Much human-caused affliction in current Kongo thinking is attributed to situations of contradiction in which persons are at odds or cross-purposes with one another (consciously or unconsciously) as in land disputes, or in the competition for resources over profit-making enterprises, on the one hand, or for lineage ceremonial and welfare funds on the other. Staff conflicts in modern bureaucracies and job settings also occasion the diagnosis of 'human' cause. All these situations are believed to arouse ill will and envy in people, and to lead directly to breakdown of health in the antagonists, or to their death.

The grammar of human-caused affliction is articulated in terms of witchcraft (*kindoki*) and nefarious magic (*min'kisi*, or *magie*). Witchcraft is concentrated in the power of words such as gossip, oaths and curses (*lok*, or *loka*), as well as hereditary possession of witchcraft power glands (*kundu*)—which may also be at the basis of a chief's or politician's power. Magic or *n'kisi* (also spoken of as 'fétichisme' by some) as an etiology of affliction arises from the tumultuous history of Kongo ritual in which recurrent reform movements have discarded part or all of a region's consecrated medicinal (*min'kisi*) paraphernalia, in the hope of making a new beginning, only to have individuals here and there begin anew to enshrine their visions as modern-day medicines. Thus, most people, especially those who have no medicines of their own,

consider others' use of magical medicines as defensive mechanisms a potential cause of sickness. The idea of an *n'kisi*-caused affliction merges, however, into the area of nature spirits and the way they present certain social and cosmic forces such as twinship, chiefly power, albinos, sacred children, and auspicious places and persons. In the era of modern Kongo prophets, school education, and Christianity, many BaKongo do not have direct access to the legitimate tradition of consecrated medicines; but the tradition is still there, beneath the surface, maintained by priest-doctors somewhat surreptitiously. I will say more about *min'kisi* below.

This range of causal agents and forces (see Fig. 2) thus spans the continuum from human cause to natural (God) cause, with a great deal of diagnostic shifting if circumstances warrant it. The shifting from one domain to another is not arbitrary, as Horton suggests, but is based on evidence in a case. To be sure, the distinction between *bisimbi* water spirits and ancestor spirits, or between spirits and human witchcraft, may seem like hair-splitting, even to BaKongo, but in the context of specific cases these differences often spell the difference between accusing parties present directly to their faces, and modulating the

causal imputation somewhat so as to enhance harmony between persons present. The concept of nature, contained in the 'God-caused' or 'God-related' (*kia Nzambi*) condition, has very little to do with divine retribution. It is more a view of something in the nature of things, likely a gully 'of God' that has washed in a field by a rainstorm. It is likely that this view of nature is closer to the European idea of natural law than often thought, for there are, in Kongo culture, well developed ideas about cyclic activities in nature affecting persons, animals, and plant life, and permanent properties in natural substances which have predictable results if used in certain ways.

The taxonomic system spelled out here (and depicted in Fig. 2) is extremely stable, having resisted centuries of change and major efforts by colonial and missionary educators to alter the Kongo view of the world. The categories may well be as fixed as Horton suggests, although they are open, subject to successive changes of particular contents. This is apparent in the system of medicines and treatments used to respond to ills arising from these causal forces, and it is apparent in the way Kongo health continues to be defined.

Flowing from these assumptions about the nature of the world and the causes of fortune and misfortune.



Fig. 2. Graphic portrayal of major features of Kongo causal and therapeutic systems.

Kongo therapeutics and its appropriate specialists are articulated. A hierarchy of medicines, from simple and relatively weak, to composite and powerful, from curative to health-supporting, may be seen. Simple plants are called *minti*, (trees, bushes) or *makaya* (leaves). A more general term for medicine is *bilongo*, which includes plant compacts, bottles of ointment, pills, injections and other hospital medicines. *Bilongo* may be simple or composite, they may be administered by a laymen or a specialist. By definition, this level of medicine is different from consecrated medicines (*min'kisi*) which must be handled only by consecrated specialists (*banganga*).

Western biomedicine has largely been integrated into this level of simple *bilongo* medicines, for the treatment of diseases understood as 'natural'. Diviners, various prophets, and lay therapy managers have been quick to discern the areas of competence of biomedicine, and the nature of its classificatory focus. They are impressed with the direct cures of biomedicine for smallpox, bilharzia, sleeping sickness, parasites, malaria, and others which their traditional pharmacopeia handled less well. Thus, in many areas, traditional medicines are replaced by manufactured synthetic drugs, when available and affordable. But Kongo diagnosticians have been as quick to see the outer parameters of biomedicine, in terms of their classifications. First Western practitioners denied the reality of human-caused afflictions, of witchcraft and *min-kisi* caused illness. Then, too, the therapies of biomedicine didn't address issues of pollution, vulnerability, and anger. The consequence was that Ba-Kongo worked out a rather intricate selection rationale for utilizing the treatment appropriate for the particular cause perceived. It is true that a host of diseases such as fevers, infections, and pathologies once dealt with in terms of human causation have now, with greater scientific knowledge in the Kongo community, come to be dealt with as natural causation. But new issues and problems have arisen in modern life which require continuing treatment in those terms.

Min'kisi, consecrated medicines proper, have a charter going back to a vision, fixed recipes of ingredients (*bilongo*), techniques, and spells or songs and dances, and they require specialists, for they are 'too hot' for laymen to handle. *Min'kisi*, historically, have made their appearance in areas of life where there is crisis, transition, danger, recurrent accident, high responsibility, or core social values. We must not impose too narrow a definition, from narrow physical biomedicine, upon Kongo *min'kisi*. They may be chemotherapeutic compounds of several plants, like the sedative recorded in *The Quest for Therapy*, in the case "A history of madness" for psychotic agitation. They may be manipulative techniques like the cupping horn, used as a symbolic specific to remove pollution from the body of a mixed up sufferer. They may also be massive ritual organizations to control international trade so that local communities are not destroyed through involvement in it. The definitive story of Kongo consecrated medicines has yet to be written, but the more I study particular clusters of medicines carefully, the more respect I gain for them [7, pp. 37-66; 8, pp. 317-326; 9, 26].

Of course the specialists (*banganga*) who 'compose'

(*handa*) these medicines vary in their titles, competences, and importance depending on the medicine. Diviners such as the *ngombo* user, have a history of prominence in Kongo, until replaced by prophets. Other specialists like the cupping-horn users seem to be relatively permanent in their work. Then there are generalists like the *nganga n'kisi* who is supposed to know 'all' medicines, and the *nganga lunga*, (all-encompassing, *lunga*) although the one I knew was an orthopedist. There are as many different kinds of specialists as there are medicines, and with 450 years of recorded history to work with, the inventory of both is stunningly rich.

A small cross-section of consecrated medicines stands out in this history of Kongo medicine as being especially prominent and powerful. I have in mind the 'drums' (*ngoma*, *n'konko*, *n'konzi*), which, according to Kongo attribution, have several functions—whereas the standard *min'kisi* have only one each—and are made up of a corporate group membership which participates in periodic ceremonies. It is at the point of moving from simple secular medicines, to consecrated medicines, and especially to corporate drums, that the Kongo medical tradition generates a health institution. Membership consists of fellow sufferers of a common affliction, who, in drawing together, produce a bond, a social contract. Those afflicted or recruited, and cured or stabilized in their relationship to the sickness—be it reproductive disorders, hernias, alienation, twins, entrepreneurial zeal—are considered best suited to become specialized doctors of the ailment for which the drum is known. Sickness is often seen as a sacred calling, manifested as possession by a spirit of a former drum member. If the possessing sickness is placated, the disease brought under control, it at once purifies and energizes the individual, placing him in debt to society which henceforth expects him to consecrate his newly found gifts as medium in this specialized domain to the service of others. The ingenious quality of the historic, fully-incorporated, drum is that it presents a relatively specific health view to a given clientele with the means of sustaining it through particular behaviors and supportive others.

Here too, as in the matter-of-fact medicine addressed to the naturally-caused afflictions, there are changes. Drums tend to flourish in relatively stable times where centralized power is not too strong. This explains, I suspect, their absence in Zulu society, or in colonial society. They have thrived on the edges of empires, as among the Ndembu where Turner gives good account of them, and between states, as in the caravan regions between Malebo Pool of Lower Zaire and the coastal trading posts. In times of rapid change well-defined drums may dissolve, to be replaced by ephemeral movements symptomatic of the troubling issues facing the society. They wax and wane, offering the scholar a clear indicator of sociocultural stability and of the strains of sociocultural change. In Kongo society independent churches, mission churches, civic associations, and neo-cultic organizations such as the Rosicrucians have stepped in to fill the gap left by the disintegration of some of the well-known pre-twentieth century drums like Lemba. Of course, urban industrial life has presented Ba-Kongo with new kinds of issues: the tensions of wage

labor, job competition, political responsibility and uncertainty, alienation, and the like. Some new drums have emerged, in the old genre, as well, as the case of Zebola, reported by Corin, amply demonstrates [27]. But the genre of the drum (*ngoma*), which spans the mid-continent from Matadi to Dar es Salaam, is a vehicle of African therapeutics to provide a means of surmounting curative measures against disease and achieving the construction of a partial 'utopia of health'.

In the past, conscious structures of health and adaptation have been worked out in the context of drums and related political structures of the community, and in general attitudes of social harmony. It remains to be seen to what extent the real problems of industrial society can be inserted into this format, although some good examples may be named, like the Zebola, or the Beni-Ngoma (Kalela Dance), of the Copper Belt [28, 29]. There is always the danger, as expressed by Swantz in her work on Tanzania, that the symbols of a therapeutic community fragment into magical tools for use in individual power plays, expressed in competing jinn spirits [20, pp. 316-334; 30], or as in Kongo society, witchcraft accusation and the suspicion of run-away magical aggression.

But then medicines have always in fact fallen short of the expected, or promised, aim. This fact does not daunt the human spirit, apparently, nor should it discourage the analyst from trying to grasp the utopia of health which generates the patterns of classification and causation. For the Kongo, this has been expertly formulated by Mahaniah:

[When sickness occurs], all community members are mobilized and concerned. A rapid and effective solution must be found to re-establish the normal equilibrium of the subject. This essentially ritual treatment aims to purify the community and with the return of harmony, to guarantee general well-being. These practices, at once religious and medical, are seen as an intervention of supernatural forces which have as their function to re-establish a harmonious order. Thus, to treat a sufferer is not only to re-establish his organic-physical normality, but also to recreate the order characterized by social and ritual harmony. A harmonious society... is one in which there are no social conflicts, no sicknesses, no disasters, epidemics or premature deaths... where people do not practice cursing, sorcery and fetishism and where there are good relations between the living and the ancestral world. This new order, is the result of a ritual purification of the community and the eradication of spells and nefarious fetishes, the sign of the golden age each one awaits [31].

CONCLUSION

The point I've tried to make is that it's heuristically important to consider taxonomies and causality in therapeutics not just from the narrow medical view, which reacts to whatever sicknesses exist, but also from the health view, so that one can more readily perceive the premises and axioms that generate the classifications. Health, better than medicine, depicts the multiple causes and dimensions of therapeutics, thereby permitting a more accurate picture of how the system, if system it is, 'opens' up to the hiatus between the utopia of health and human experience.

The main lesson learned in this experiment is, I

hope, that therapeutics will always be constituted of alternatives, and new and somewhat contradictory possibilities. Complete closure, both culturally and analytically, is never possible. To say so is to impose too-perfect a model. We have seen how the category of natural causation—present among all societies examined, from the !Ko bushmen to the Azande, the Mandari, the Zulu and the Kongo—has been one source of openness to new perspectives, including biomedicine. But at the other end of the gamut, where fixed and sacred 'codes' (*makanga* in KiKongo for tying an *n'kisi*) are prepared, here too there is continual change, as the Kongo case has demonstrated.

Therapeutics is thus by definition never a closed system—except in the movies, where occasionally *Death takes a Holiday*.

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SIGNES THERAPEUTIQUES ET PROSE DE LA VIE EN AFRIQUE NOIRE

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Résumé—C'est plutôt une interprétation générale de la thérapie africaine qui est tentée ici. Dans une première partie, l'auteur s'inspire de la manière dont Michel Foucault a décrit la constitution progressive des sciences humaines dans la tradition européenne et montre qu'il y a moyen de comprendre en profondeur le sens et les pratiques thérapeutiques africaines en utilisant des catégories universelles de la ressemblance. Elles sont au nombre de quatre: la *convenance*, l'*émulation*, l'*analogie* et la *sympathie*. La convenance est, dans la tradition africaine, une légalité et une liaison majeure: entre personnes comme entre choses. L'émulation fonctionne, quant à elle, comme principe opératoire dans la médecine des guérisseurs: elle est, en effet, la clé de la cohérence des jeux complexes de forces qui peuvent provoquer ou annuler la maladie comme le mal. L'analogie, troisième similitude, transcende la convenance et l'émulation. Elle est, à la fois, un élan et un code de ressemblances et établit une cohésion et une interdépendance entre tous les règnes du monde et de l'univers: minéral, végétal, animal, humain, ancestral, céleste. Enfin, dernière similitude, la sympathie ne peut se concevoir qu'en opposition à l'antipathie, son contraire. Elle coiffe complètement l'analogie et lui donne sens et valeur. Elle est le signe et la vocation dont se réclament les guérisseurs africains.

Dans la deuxième partie, l'auteur montre que cette conception de la vie fondée sur l'antagonisme éternel de la sympathie et de l'antipathie, et qu'incarne le guérisseur face au sorcier, est aujourd'hui dominante, aussi bien dans les centres urbains que dans les régions rurales. Et son extension comme sa généralisation sont beaucoup plus que de simples faits sociologiques. Elles engagent la vie des hommes.

Mais l'exercice de la thérapeutique africaine ouvre à un autre problème: celui de la signification de l'acte thérapeutique. Et sur ce point précis, comparée à la médecine scientifique, la médecine des guérisseurs paraît fortement dépendante des mythes naturels de fondement et privilège le destin de l'espèce, alors que la médecine moderne tendrait plutôt à promouvoir le destin de l'individu.

Abstract—In the first part of this interpretation of African therapy inspiration is drawn from Michel Foucault's description of the progress of the human sciences in Europe to understand in depth the meaning and practice of African therapeutics through the use of four universal categories of resemblance: *harmony*, *emulation*, *analogy* and *sympathy*. Harmony, in the African tradition, is a required major link between persons and things. Emulation as a principle in the medicine of the healers is the key to the coherence of a complicated play of forces that can provoke or annul sickness and disease. Analogy, the third type of resemblance, transcends harmony and emulation. It is at once source and code of all resemblances, establishing a cohesion and an interdependence between all kingdoms of the earth and the universe: mineral, vegetable, animal, human, ancestral, celestial. Finally, sympathy, the last resemblance, can only be defined in terms of its opposite, antipathy. It enhances analogy and gives it its meaning and value. It is characterization and calling of African healers.

In the second part this conception of life grounded in the antagonism between sympathy and antipathy, which embodies the relationship of healer to sorcerer, is shown to be dominant today, in urban as well as rural areas. Its distribution as well as its presence are far more than sociological facts, they engage the very life of man.

However the practice of African therapy opens up to another issue: the significance of the therapeutic act. Compared to scientific medicine, the medicine of the healers is very dependent on natural myths of origin concerning the fate of the species, whereas modern medicine tends to address the fate of the individual.

INTRODUCTION

Je ne pourrais pas, en ces quelques pages, prétendre 'révéler' les rapports objectifs existant entre les 'signes thérapeutiques' et la 'prose de la vie' en Afrique Noire. Je laisse volontiers cette ambition aux anthropologues et à leurs grands projets. J'avoue n'avoir jamais compris leur assurance, encore moins leurs certitudes. Au sortir d'une enquête, ils affirment, de manière tranquille et souveraine, établir 'le' tableau d'un ordre social africain alors que ce qu'ils offrent le plus clairement est leur lecture, bien particularisée par leur regard et la langue qu'ils emploient, et non pas la massivité objective d'une société radicale-

ment différente de la leur et des significations que celle-ci reconduit le plus visiblement. Peut-être que la chimère qu'est une 'certaine' anthropologie déboucherait sur un sens nouveau: l'exigence, pour aujourd'hui, de reprendre, sans complaisance mais sans facilité non plus, l'interrogation des 'sociétés différentes' autrement que sous le mode de l'alibi.

Je ne prétends pas non plus, sous couvert d'une quelconque 'philosophie africaine', fournir une image rigoureusement 'réelle' du croisement des signes thérapeutiques et du bruissement des symboles et faits de la vie dans un espace africain. Ce serait d'une belle naïveté que de couvrir du nom de philosophie un

commentaire qui prétendrait dédoubler fidèlement une expérience silencieuse.

J'ai pris plutôt le parti de proposer une hypothèse de lecture et de compréhension des entrecroisements des 'signes thérapeutiques' et de 'la prose de la vie' en Afrique. Par 'signes thérapeutiques', j'entends les indices, manifestations, marques, symptômes, preuves et prescriptions d'un traitement ou d'un conditionnement appelés à modifier—en bien ou en mal, mais généralement en bien—l'état de santé physique, psychologique ou social d'un individu. Et par 'prose de la vie en Afrique': la façon et la manière particulières dont, aujourd'hui, la vie, soumise aux orgues—souvent mystificatrices, il est vrai—de la Tradition et aux effets des contraintes socio-économiques actuelles, se déroule, se subit, s'assume ou s'annonce dans la passion, la frénésie ou la discrétion des existences. Pour la lecture qui m'a conduit à ce texte, il m'a fallu trouver des concepts-guides et un horizon net qui me permettent d'assigner aux idées et aux faits des rôles clairs afin de les mieux intégrer en un champ de connaissances. Et j'ai tenté de reprendre et d'user, à titre d'hypothèse, des outils que M. Foucault a mis au clair en lisant des textes de l'âge classique européen afin de soutenir son 'archéologie des sciences humaines'.

Voilà, me dira-t-on, vous partez d'a priori inacceptables! Vous prenez un épistémologue français lisant, de manière singulière et toute nouvelle, les figures qui, progressivement, au cours des siècles, constituent et amènent la cohérence des sciences humaines; vous retirez du contexte quelques concepts parfaitement 'encombrés' par une histoire. Et ils ouvriraient à une intelligence claire et crédible des signes thérapeutiques et de la prose de la vie en Afrique! En somme, vous 'dérailonnez' le milieu africain et condamnez à une déréliction affligeante 'le message' et 'le savoir' africains. Ces belles questions ne m'indiquent pas, au niveau d'interprétation où j'aimerais me situer, comment parcourir l'espace où s'exorbitent, désordonnés et en quilles, de nombreux amas d'informations provenant de cultures et traditions extrêmement diverses. Quel milieu donnerait les clés adéquates? De quelle expérience particulière surgiraient, vifs et généraux, des canons d'interprétation générale? Mais en se hissant légèrement au-dessus des fulgurances contradictoires des coutumes et préceptes, des thèmes communs s'imposent d'eux-mêmes. Et j'ai été ébloui de voir qu'en somme et en réalité, c'est eux qui m'ont poussé à relire d'abord B. Groethuysen et, ensuite, M. Foucault. Au retour de cette soumission conceptuelle, ce fut, me sembla-t-il, le triomphe de la constance des concepts qui, s'infléchissant avec bonheur à la prose africaine, instaura les relais que je propose.

Aussi aimerais-je laisser à ceux qui les apprécient les eaux encombrées par les scintillements de l'exotisme. Et abordons donc l'Afrique, dans son opacité présente, en nous situant, grâce à des armes claires, à un niveau qui puisse, au moins, permettre un arrangement rigoureux et lisible des signes multiples et contradictoires.

—Mais vous n'êtes pas original!

—Justement. Au moins, ai-je le mérite de le dire d'entrée en jeu. Et, si vous le voulez, voyons, à présent, ce que peut mon hypothèse.

L'ESPACE THERAPEUTIQUE ET L'ORDRE DU MONDE

Je serais tenté de penser que les quatre grandes similitudes qui, sous le signe de la 'ressemblance', jouent un rôle majeur dans le savoir occidental aux XVI^e et XVII^e siècles [1, 2], pourraient utilement 'introduire' à une compréhension de l'ordre thérapeutique africain.

Il y a d'abord la *convenientia*. Pour la dire, dans son 'archéologie des sciences humaines', Foucault invoque Porta (*Magie Naturelle*, trad. française, Rouen, 1650; *La Physionomie Humaine*, trad. française, 1655); Aldrovandi (*Monstrorum Historia*, Bononiae, 1647) et Campanella (*Realis Philosophia*, Francfort, 1623). Elle lui semble être "une ressemblance liée à l'espace dans la forme du 'proche en proche'. Elle est de l'ordre de la conjonction et de l'ajustement. C'est pourquoi elle appartient moins aux choses elles-mêmes qu'au monde dans lequel elles se trouvent. Le monde, c'est la 'convenance' universelle des choses". Ainsi, la *convenientia* désignerait principalement et nettement le voisinage des lieux: "sont *convenantes* les choses qui, approchant l'une de l'autre, viennent à se jouter; elles se touchent du bord, leurs franges se mêlent, l'extrémité de l'une désigne le début de l'autre. Par là, le mouvement se communique, les influences et les passions, les propriétés aussi. De sorte qu'en cette charnière des choses, une ressemblance apparaît" [1, p. 33].

La *convenientia* instaure donc une forme de légalité dans l'ordre de dépendance et de complémentarité des choses et des êtres. "Dans la vaste syntaxe du monde," écrit Foucault, "les êtres différents s'ajustent les uns aux autres; la plante communique avec la bête, la terre avec la mer, l'homme avec tout ce qui l'entoure. La ressemblance impose des voisinages qui assurent à leur tour des ressemblances" [1, p. 33]. Et le monde, l'univers n'est donc plus qu'une chaîne complexe et naturelle de ressemblances par convenance. Et la vie de l'homme est tout autant reliée aux cailloux, à la végétation qu'au cours des étoiles. "Unde corpora caelestia secundum diversas partes suas et diversos aspectus causant diversitatem in mundo inferiori", estimait Pomponazzi [2, p. 167]; soumettant l'univers et son ordre à la légalité de l'interdépendance. Celle-ci s'exprime sous la convenance lorsque d'une réalité à une autre proche, un croisement s'effectue grâce au lieu et à la similitude.

Ainsi comprise, la *convenientia* est légalité générale, liaison majeure de l'espace africain: choses et êtres sont, de proche en proche, reliés les uns aux autres et c'est en cette soumission que désignent la proximité et la ressemblance que se disent et s'affirment la loi de la communication et le régime des propriétés similaires. Trois illustrations peuvent servir d'exemples: la première indique une norme fondamentale de la pharmacopée; la deuxième, une règle générale de thérapie; la troisième, une pratique magique.

(a) Moments propices à la récolte des plantes médicinales [3]

L'homme est né sous l'un des groupes d'étoiles suivantes: Sainsou (dimanche), Gamarr ou Gamarrou (lundi), Mariech (mardi), Outaridou (mercredi), Moustarii (jeudi), Zouhourath (vendredi), Zoual (samedi). Lorsqu'une personne tombe malade, la récolte de la plante (ou des

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plantes) destinée à lui rendre la santé est faite au jour correspondant à celui de sa naissance et à une heure qui varie avec le groupe d'étoiles sous lequel elle est née. Un exemple: *Mamadou*, né sous *Zouhourath*, est souffrant. Le médicament qu'on lui destine est cueilli un vendredi au cours de la période qui va de deux heures à trois heures de l'après-midi. Lorsqu'on ignore le jour de naissance d'un malade, on se base sur celui du début de sa maladie [3].

La chaîne légale est claire. Elle s'affirme comme donnée étreignant les voisinages. Elle est aussi réalité scintillante des similitudes, et ses maillons sont à la fois miroirs et reflets: l'étoile et le jour de la semaine, la maladie et la plante, la récolte des plantes médicinales et le jour de naissance, le surgissement d'un être dans le monde et le cours des astres.

(b) *Traitement général*—pour traiter n'importe quelle affection [3, pp. 11–12]

Toute la flore terrestre dérive de sept plantes mères créées en sept jours: lundi, le *nzaba* (*Landolphia owariensis*); mardi, le *nére* (*Parkia biglobosa*); mercredi, le *toutou* (*Parinari curatellacifolia*); jeudi, le *diaro* (*Securidaca longipedunculata*); vendredi, le *mana* (*Lophira alata*); samedi, le *youroukourou* (non déterminé faute d'échantillon); dimanche, le *nkounguié* ou *ngounguié* (*Guiera senegalensis*). Si on connaît le jour du début du mal, il suffit d'effeuiller la plante dont la création correspond à ce jour. Faire infuser ces feuilles et se baigner dans l'infusion pour être guéri. Si le mal est déterminé, par conséquent le remède connu, introduire, dans le médicament ordinaire de la maladie, une poignée des feuilles de la plante appropriée, choisie parmi celles sus-mentionnées, pour obtenir une guérison encore plus sûre et plus rapide [3, pp. 11–12].

C'est la même organisation de relations par proximité et ressemblance essentielles qui éclate ici aussi: création du monde et fondation de la végétation, plantes médicinales et guérison de maladies, être humain et ordre du monde.

(c) *Pour faire une bonne récolte*

—Mélanger à la semence une poudre obtenue en pilant un gui (*Loranthus*) de fari sansami (Haoussa: *Lonchocarpus laxiflorus*). Remplacer ce dernier produit par un gui (*Loranthus*) pilé de sansami (Haoussa: *Stereospermum Künthianum*) pour obtenir le même résultat.

—Ayant le dos tourné, arracher une poignée de gui (*Loranthus*) de dégué (Bambara: *Ximenia americana*), le pulvériser. Ajouter le produit obtenu à la semence de mil qu'on humecte légèrement avant de la confier au sol. La récolte sera abondante.

—Piler un gui (*Loranthus*) de Sana (Bambara: *Daniellia oliveri*). Mélanger la poudre obtenue à la semence de mil, ajouter un peu d'eau et brasser avant de la confier au sol [3, p. 531].

En cette troisième prescription, les attachements et les voisinages sont, probablement, d'une lecture et d'une compréhension immédiates: semence, poudre de plantes, salive, eau, plante, sol, récolte. Dans ce dernier cas, comme dans celui des deux illustrations précédentes, à partir de n'importe quel point, d'une quelconque issue, il est toujours possible de retrouver et de cerner un ordre d'interdépendance par la convenance; et celle-ci déploie 'un texte' tout en connexions qui, en amont, se déroule désignant la vie sous sa forme la plus universelle et, en aval, spécifiant les multiples et innombrables formes de vie. La convenance, telle que l'indiquent les trois illustrations, paraît être le fondement et la première explication de la proli-

fération de la vie: elle est, d'un bout à l'autre d'un 'texte' immense, le signe qui relie et explique.

Lisant l'époque classique européenne, Foucault considère cette forme de similitude comme "double dès qu'on essaie de la démêler: ressemblance du lieu, du site où la nature a placé les deux choses, donc similitude des propriétés; car en ce contenant naturel qu'est le monde, le voisinage n'est pas une relation extérieure entre les choses, mais le signe d'une parenté au moins obscure. Et puis de ce contact naissent par échange de nouvelles ressemblances; un régime commun s'impose; à la similitude comme raison sourde du voisinage, se superpose une ressemblance qui est l'effet visible de la proximité" [1, p. 33]. Je comprends et je vois, pour ma part, qu'à la base de la pratique thérapeutique africaine, il y a, clairement affirmé, le fait de la convenance comme clé de lecture de l'ordre du monde et donc, tout à la fois, de la maîtrise d'un savoir général et de la pratique d'une science 'médicale' qui est ici science de l'ordre du monde. La convenance indique, en effet, des liaisons nécessaires et désigne des dépendances naturelles et fatales. Ainsi, par exemple, soit le tableau suivant des "apparitions successives des étoiles au cours de 24 heures" [3, p. 10].

1 hr	6–7 hr	Outaridou	13 hr	6–7 hr	Sainsou
2 hr	7–8 hr	Gamarr	14 hr	7–8 hr	Zouhourath
3 hr	8–9 hr	Zoual	15 hr	8–9 hr	Outaridou
4 hr	9–10 hr	Moustarii	16 hr	9–10 hr	Gamarr
5 hr	10–11 hr	Mariech	17 hr	10–11 hr	Zoual
6 hr	11–12 hr	Sainsou	18 hr	11–12 hr	Moustarii
7 hr	12–1 hr	Zouhourath	19 hr	12–1 hr	Mariech
8 hr	1–2 hr	Outaridou	20 hr	1–2 hr	Sainsou
9 hr	2–3 hr	Gamarr	21 hr	2–3 hr	Zouhourath
10 hr	3–4 hr	Zoual	22 hr	3–4 hr	Outaridou
11 hr	4–5 hr	Moustarii	23 hr	4–5 hr	Gamarr
12 hr	5–6 hr	Mariech	24 hr	5–6 hr	Zoual

—L'ordre et le régime de succession des étoiles relèvent de la 'science du monde' et celle-ci enseigne qu'en vingt-quatre heures, trois étoiles (*Gamarr*, *Outaridou* et *Zoual*) apparaissent, chacune, quatre fois; quatre étoiles (*Mariech*, *Moustarii*, *Sainsou*, *Zouhourath*) apparaissent, à tour de rôle, trois fois; soit donc: d'une part, trois fois quatre; et d'autre part, quatre fois trois;

—L'observation traditionnelle indique que "à la première apparition, ces étoiles se présentent à nous blanches; à la deuxième, noires et à la troisième mélangées (étoiles blanches et noires)"; et la maîtrise de la pharmacopée africaine impose, pour la rigueur et l'orthodoxie de la pratique, que "la récolte des plantes médicinales doit se faire au cours de cette période (étoiles mélangées: c'est-à-dire blanches et noires)". Une technique en découle: "en magie, quand on est pour le bien de quelqu'un, on travaille pour lui sous son étoile blanche; dans le cas contraire, sous son étoile noire";

—L'on voit aussi, sans forcer les choses, que la *convenientia* se dit également dans la proximité des étoiles et des jours de la semaine: *Outaridou*, l'étoile, équivaut à mercredi; *Moustarii* à jeudi, *Zouhourath* à vendredi, *Zoual* à samedi, etc. La *convenientia* est aussi en un ordre éclatant: l'ordre de succession des étoiles signifie un régime de couleurs fatales: blanc.

noir, mixte; et ces voisinages naturels, s'ils disent des liaisons, ouvrent à d'autres complémentarités à la fois visibles et considérées comme logiques: le mal ou le bien qui peut être fait à un patient s'origine en des convenances primaires et s'actualise comme conséquence des ressemblances situées à un autre niveau d'efficacité; ou encore, en une autre direction, l'accomplissement parfait du cours des étoiles en une journée signifie l'épaisseur des jours de la semaine et s'achève en l'évidence d'un chiffre, douze, que proposent, complémentirement, les trois étoiles apparaissant quatre fois (*Outaridou, Gamarr, Zoual*) et les quatre qui se montrent trois fois (*Moustarii, Mariech, Sainsou, Zouhourath*).

Le deuxième type de ressemblance est l'*aemulatio*. Foucault, pour l'illustrer, fait intervenir Paracelse (*Liber Paramirum*, trad. Grillot de Givry, Paris, 1913) et Crollius (*Traité des Signatures*, trad. française, Lyon, 1624). L'*aemulatio* est "une sorte de convenance, mais qui serait affranchie de la loi du lieu, et jouerait, immobile, dans la distance. Un peu comme si la connivence spatiale avait été rompue et que les anneaux de la chaîne, détachés, reproduisaient leurs cercles, loin les uns des autres, selon une ressemblance sans contact. Il y a dans l'émulation quelque chose du reflet et du miroir: par elle, les choses dispersées à travers le monde se donnent réponse" [1, p. 34]. Ce n'est plus ici une légalité positive qui est instaurée, mais plutôt une philosophie si l'on veut, c'est-à-dire l'explicitation de rapports 'logiques' possibles entre choses ou êtres; non point transposition et, ensuite, ajustement d'images différentes; mais bien, à tous les niveaux, partout, et pour toutes choses, le fait de correspondances: une chose donnée apparaît et s'impose de manière certaine comme reflet et celui-ci sort d'un miroir. Ainsi, pensait Crollius: "les étoiles sont la matrice de toutes les herbes et chaque étoile du ciel n'est que la spirituelle préfiguration d'une herbe, telle qu'elle la représente, et tout ainsi que chaque herbe ou plante est une étoile terrestre regardant le ciel, de même aussi chaque étoile est une plante céleste en forme spirituelle, laquelle n'est différente des terrestres que par la seule matière... les plantes et les herbes célestes sont tournées du côté de la terre et regardent directement les herbes qu'elles ont procréées, leur influant quelque vertu" [1, p. 35]. L'*aemulatio* est donc non seulement correspondance de forme mais aussi communication de vitalité: tous les champs du monde répètent et reproduisent jusqu'à bout de signification les forces et la frénésie d'être des éléments qui s'approprient et se répondent.

Du côté africain: deux témoignages montrent les scintillements de l'émulation comme un des principes essentiels de l'ordre du monde. Du prophète Atcho: "le sang est l'esprit de l'homme. Il est défendu de le boire (...). Dieu mesure le sang de l'homme à sa naissance et à sa mort (...). Si l'homme meurt, ne pleurez pas le corps, mais pleurez le sang, c'est-à-dire l'esprit. Le corps est semé par la terre, il rentrera à la terre. Mais le sang est formé par Dieu. C'est la convoitise qui verse le sang" [4]. Ensuite, le fameux panvitalisme des traditions négro-africaines témoignerait excellemment de l'efficacité généralisée de l'émulation dans l'univers: Bastide lisait, autrefois, les signes et contraintes de la vie dans l'économie africaine du sacré qui, par phases successives, va du minéral à

l'animal en passant par le végétal [5]; dans un travail récent, Kagamé cernait des formes différentes de la vie en dissociant l'existant figé (ordre minéral), l'existant assimilatif (ordre végétal), l'existant sensitif (ordre animal), l'existant éternel (ordre de descendance), le préexistant ou fondateur de tous les ordres [6]; synthétisant de nombreux travaux des cinquante dernières années, Thomas et Luneau affirmaient: "les religions négro-africaines sont tout entières axées sur le problème de la Vie puisque, pour elles, tout est force, organisation et équilibre, puissance de renouvellement. C'est pourquoi toutes les puissances de l'univers sont à la fois nourries et nourrissantes, et le sacrifice, pièce maîtresse de la liturgie animiste, devient, par la communion finale, un échange de nourriture" [7]. Donc, en des rapports complexes et multipliés à l'infini, l'émulation se dit dans la communion: le reflet s'achève dans ce qui le suscite. Ou, plus exactement, je dirais: toute forme est simultanément elle-même et leur d'un désir qui l'éclaire, la justifie et la vivifie.

L'émulation est probablement, tant en médecine qu'en magie africaine, le principe le plus visiblement opératoire. D'une application constante et généralisée, elle anime les *deux* et *uniques* voies d'intervention pour le rétablissement d'un équilibre vital perturbé: la première voie consiste à 'guérir' en faisant intervenir des vertus propres à l'être ou à la chose qui a perturbé ou suscité le déséquilibre; autrement dit: en injectant au patient une dose de 'force' provenant de ce qui est la cause de sa souffrance, l'on éteint celle-ci; la deuxième voie réside en un détournement subtil, à l'avantage du patient, de vertus ou d'une combinaison de vertus provenant d'autres règnes: minéral, végétal, animal, humain ou éternel. Je dis qu'il s'agit là des seules voies d'intervention, car le fonctionnement de l'émulation, dans le cadre précis de la médecine et de la magie africaines, s'accomplit en affrontements et conjonctions de figures semblables qui se désignent seulement en ces deux voies. On remarquera aussi trois faits importants à propos de ces deux voies. D'abord, que la première voie est essentiellement exercice de compensation et, à ce titre, l'on comprendrait aisément que son usage soit plus fréquent dans l'univers magique que médical—bien que cette distinction théorique ne me semble pas, surtout dans ce cas précis, pertinente—et puis, que la philosophie de la thérapie de cette première voie ne pourrait se réduire uniquement à la norme positive de combattre le mal par ce qui le provoque, à l'image du principe des antibiotiques en médecine scientifique moderne; il s'agirait plutôt d'opposer à une souffrance ou à un manque, l'efficacité de vertus compensatrices puisées dans la cause directe du mal, et ce parti-pris peut, évidemment, 'inclure' et 'comprendre' le principe positif d'un investissement antibactérien; ensuite, il est clair que la deuxième voie signifie remontée et désignation de la cause d'un mal et, afin d'annuler celle-ci, intervention par des drogues et des pratiques diverses. D'autre part, l'ordre de 'l'économie des vertus' qui interviennent ressortit à un savoir traditionnel que l'on pourrait, en principe, affronter avec des méthodes expérimentales modernes, mais en admettant que les points névralgiques des cohésions et les liens qu'établit l'émulation sont, peut-être, majeurs par rapport aux règles usuelles d'induction et de déduction. C'est qu'à ce niveau, une cohérence 'autre' organise les

figures et leurs doubles, les accords et les dépendances, les enchaînements et les discords, présidant en même temps aux applications périlleuses d'un savoir: celles-ci peuvent, en des hardiesses inattendues de similitudes, exiger tel appel et non pas tel autre à l'ordre minéral, tel mélange particulier des essences, telle qualité d'humeur animale, ou tel type de jeu psychologique [8-10].

Quelques illustrations de traitements médicaux et magiques:

(a) *Rage (Morsure de chien)*

—Manger le foie grillé sur la braise de l'animal assommé. Réduire en poudre une certaine quantité de poils de la queue carbonisés et l'appliquer, pétrie de beurre végétal, sur la morsure. Si l'animal a été excité (magie), se baigner en outre dans une décoction de gui (*Loranthus*) de nzaba (*Landolphia owariensis*).

—Saupoudrer la plaie d'une poudre obtenue en broyant des écorces de siri (*Burkea africana*). La même poudre peut être utilisée contre une plaie ordinaire.

—Exposer la morsure au-dessus d'une fumée qui (se) dégage d'un tesson de canari cassé contenant du charbon allumé et des fruits et feuilles concassées de sama-néré (*Entada africana*).

—Appliquer sur la morsure une pâte, obtenue en pétrissant de beurre animal des poils du chien qui a mordu, carbonisés et réduits en poudre fine [3, p. 74].

En ces quatre prescriptions, l'on verra trois tendances: le premier paragraphe réunit en une complémentarité d'action thérapeutique ce que j'ai séparé plus haut, la première et la deuxième voie d'action de l'émulation; le deuxième et le troisième paragraphes ressortissent strictement à la deuxième voie, et le dernier à la première. C'est le premier paragraphe qui semble exemplaire. La guérison s'y affirme comme résultante de procès divers mais convergents: les vertus compensatrices puisées dans le foie, c'est-à-dire au centre même de la vitalité de l'animal responsable de la morsure, peuvent amplifier leur effet grâce à l'efficacité d'une mixture (poils et queue grillés + beurre végétal); et, au besoin, pour contrecarrer un sort ou une entreprise magique, devenir plus fortes encore grâce à un bain d'un genre particulier. Et, en ce site complexe, l'on noterait, reliées les unes aux autres et percées par l'émulation, au moins trois choses remarquables: le foie qui est siège de la vie, les poils passés au feu et l'eau marquée par les qualités du 'gui de nzaba'.

(b) *Impuissance*

—Bouillir longuement des racines de tomi (*Tamarindus indica*) et un assez gros morceau de néguébo (gangue). Fermer hermétiquement le récipient et le mettre de côté où il doit rester trois jours. A partir du quatrième jour au matin, commencer à faire usage du liquide en buvant. Ranime le membre viril.

—Pulvériser ensemble des raclures provenant des racines de mpalampala ou mbala-mbala (*Phyllanthus reticulatus*) de kolokolo (*Afromosia laxiflora*), de kalakari (*Hymenocardia acida*), des rognons d'un très vieux coq, des organes génitaux (nerfs et testicules) d'un très vieux bouc, du manioc épluché de létionge (*Cyperus*). Absorber la poudre sèche dans un bouillon de viande rouge ou de poulet, ou la mâcher [3, pp. 220-21].

Je ne réponds absolument pas de la 'vérité' de ces prescriptions; et, de toute façon, je ne pourrais les recommander à personne, surtout la deuxième qui,

désarmante, provoque le sourire et, je le crains, risquerait de susciter des protestations des 'Sociétés Protectrices des Animaux'. En les reprenant, telles qu'elles sont données dans quelques traditions africaines, j'aimerais noter deux choses: premièrement que la libération d'une sexualité réprimée par la 'nature' est très probablement possible 'après' application de l'une ou de l'autre des deux exigences prescrites; deuxièmement, si l'ordre des conjonctions de la première prescription peut s'étaler, vraisemblablement efficace et explicable, en un tableau que l'on pourrait reconnaître, celui de la deuxième proposition paraît non ordonnable de la même manière—sans doute aussi est-ce une des raisons pour lesquelles il fait sourire des 'esprits cartésiens'—si l'on ne tient pas compte d'un enchaînement des parcours de l'émulation: face au fond où s'accumulent des mélanges de raclures et d'organes, un autre espace, celui des métaphores où se croisent chiffres et reflets de l'émulation: le coq, le bouc et la virilité de l'homme.

(c) *Comment empoisonne-t-on une noix de cola?*

Mettre à nu une racine de bakala (Bambara) ou samberou (Haoussa: *Erythrophloeum africanum*), y fixer une aiguille puis ramener la terre. Le septième jour, déterrer l'aiguille et la fixer sur une noix de cola où elle reste deux ou trois heures. Croquer une telle noix de cola, c'est s'exposer à une mort foudroyante, immédiate.

Antidote: Boire, délayé dans une eau, du datou (condiment préparé avec des graines de l'oseille de Guinée) [3, p. 584].

(d) *Pour n'avoir peur de rien*

Absorber dans un bouillon de viande (une fois suffit) une poudre très fine composée d'une poignée de fleurs de fourala (Bambara de Sikasso: *Sida carpinifolia*), d'un morceau sec de rate d'un boeuf et un dynéné-colo (partie en terre du fuseau). Rend téméraire, audacieux [3, p. 595].

(e) *Pour rendre une femme stérile*

Rechercher dans un champ un beau pied de maïs ne portant aucun épi. Dès qu'on en trouve, dire, avant de le couper d'un seul coup de couteau: "Tu n'es pas seul dans ce champ! la raison pour laquelle tu ne portes aucun épi, que cette même raison soit la cause de la stérilité de quiconque goûtera de ta cendre". Réduire ensuite, après l'avoir soumise à l'action du feu, la tige du maïs en question, en cendres. Introduire une pincée de celle-ci dans la nourriture ou dans la boisson qu'on offre à la personne qu'on désire rendre stérile et voir ladite personne dans un état impropre à la procréation [3, p. 562].

L'émulation se dit ici en un glissement de métaphores: les conséquences de l'application rigoureuse de la prescription (c) peuvent assurément être étudiées cliniquement et il est probable qu'elles disent simplement l'efficacité d'un empoisonnement; celles de (d), la témérité et l'audace, pourraient n'être que le reflet d'un débordement de l'excitation des sens à l'instar de l'irritation excessive ou des emportements que provoquent la consommation ou l'usage de certaines drogues; mais la dernière prescription, positivement d'un autre ordre, propose l'ébranlement de causes et effets reliés par des émulations secrètes fonctionnant selon une relation réversible de réciprocité: on est là, à l'extrême limite de ce que signifie l'émulation; elle introduit réellement à une autre forme de similitude, moins visible. C'est que, comme l'attestent les autres prescriptions, "l'émulation se donne d'abord sous la forme

d'un simple reflet, furtif, lointain; elle parcourt en silence les espaces du monde. Mais la distance qu'elle franchit n'est pas annulée par sa subtile métaphore; elle demeure ouverte pour la visibilité. Et dans ce duel, les deux figures affrontées s'emparent l'une de l'autre. Le semblable enveloppe le semblable, qui à son tour le cerne, et peut-être sera-t-il à nouveau enveloppé, par un redoublement qui a le pouvoir de se poursuivre à l'infini. Les anneaux de l'émulation ne forment pas une chaîne comme les éléments de la convenance; mais plutôt des cercles concentriques, réfléchis et rivaux" [1, p. 36]. Encore faut-il comprendre que l'émulation est, en ses liaisons de figures, située en deçà des thèmes et non pas dans le rapport que ceux-ci peuvent entretenir: ainsi, par exemple, dans (b), entre le coq, le bouc et la virilité de l'homme; dans (c), entre la racine de bakala, une aiguille, son ensevelissement et l'empoisonnement d'une noix; dans (d), entre l'absorption d'un bouillon saupoudré d'une mixture complexe et l'audace. En effet, l'évidence de l'émulation n'éclate que lorsque la lecture de ces prescriptions tient compte d'une part de l'univers classique des symboles de la culture africaine et d'autre part, de la manière dont, dans une structure sociale, l'homme qui dit ces prescriptions et celui auquel elles s'adressent se situent dans un système d'échange symbolique.

C'est ce que montrent la force et la vitalité de la troisième forme de similitude: l'analogie. En elle "se superposent *convenientia* et *aemulatio*. Comme celle-ci, elle assure le merveilleux affrontement des ressemblances à travers l'espace; mais elle parle, comme celle-là, d'ajustements, de liens et de jointures" [1, p. 36]. Elle est ainsi un style qui découpe l'espace de la vie, reliant par déploiement de sens et réunissant, en tirant des êtres et des choses, des propriétés qui s'accumulent comme prétextes et signes de la ressemblance: "les similitudes qu'elle traite ne sont pas celles, visibles, massives, des choses elles-mêmes; il suffit que ce soient les ressemblances plus subtiles des rapports. Ainsi allégée, elle peut tendre, à partir d'un même point, un nombre indéfini de parentés" [1, p. 36]. Césalpin (*De Plantis Libris XVI*, 1583) en indiquait le polyvalence et la réversibilité en lisant, dans la morphologie de la plante, des principes inversés du système nutritif de l'animal, mais en montrant aussi l'inverse de ce premier rapport: le système veineux chez les animaux reproduirait celui de la plante. Crollius, dans le *Traité des Signatures*, plaçait l'homme en témoin exemplaire pour des lectures analogiques; de même que Belon (*Histoire de la Nature des Oiseaux*, Paris, 1555) qui établit des correspondances essentielles entre le corps de l'homme et celui de l'oiseau. Ce que veut dire M. Foucault dans ce rappel d'une pratique analogique est que "l'espace des analogies est au fond un espace de rayonnement. De toutes parts, l'homme est concerné par lui; mais ce même homme, inversement, transmet les ressemblances qu'il reçoit du monde" [1, p. 38].

L'analogie est, peut-être, la similitude majeure: elle règle la *convenientia* et l'*aemulatio* africaines et les transcende plus ou moins clairement selon les cultures. On peut, au moins, la reconnaître en des mesures exigeantes et normatives partagées par les ethnies les plus diverses: nommer, c'est s'approprier;

le totem, c'est soi; la dictée impérative d'un passé mythologique est l'endroit du présent. Plus que les deux autres ressemblances, elle s'articule, liaison essentielle, tant en médecine qu'en magie, établissant la positivité des vertus complémentaires, désignant l'expansion des circonvolutions allant du minéral à la divinité, ou l'étendue de l'expansion de la force vitale entre les règnes animal et humain; enfin signifiant, dans l'univers, les grâces et proférations naturelles et positives contre les jonctions malsaines et nocives. Ainsi, par exemple, pour vivre centenaire, la recette est tout en analogies énonçant un ordre secret d'articulation de "la force vitale": l'union du blanc (lait, vache blanche) et du noir (poudre noire, cheveu jeune, carbonisation); une symbolique du nombre, des interdits etc.

Pour vivre très longtemps

Boire quotidiennement le lait d'une vache entièrement blanche contenant dissoute une poudre noire obtenue en carbonisant et en écrasant finement une collection de ses propres cheveux faite en sept semaines; on ne se rase dans ce cas que le jour de dimanche et à chaque fois on met les cheveux de côté jusqu'à sept dimanches. On prend régulièrement le lait jusqu'à l'épuisement complet de la poudre. Quiconque a suivi ce régime vivra très longtemps, car il ne mourra avec aucun poil noir sur le corps [3, p. 605].

L'efficacité de la prescription est dans le code analogique: vaste tissu à la dimension du monde. Des relations innombrables en miroirs polymorphes disent les jonctions positives ou négatives, les mélanges bien-faisants ou nocifs. Dans le cas concret de la pharmacopée, on dirait que deux processus, presque deux règles analogiques, fonctionnent parallèlement mais en agissant l'un sur l'autre: une ligne de liaisons symboliques entre êtres et choses, et une ligne d'un savoir chimique et biologique. Mais ce ne serait qu'un même tracé "vital" dont la maîtrise signifie à la fois connaissance et pouvoir. C'est probablement sous cet angle qu'il faut comprendre les mille et une prescriptions pour soigner, intervenir, guérir. Et, à parcourir le recueil établi par Traoré, l'on se rend compte et l'on imagine aisément la complexité et l'étendue de ce savoir qui peut, indistinctement, s'attaquer à des maux divers. Ainsi:

—la coqueluche: par une mixture où interviennent l'*Azelia africana*, la *Scoparia dulcis*, le *Strychnos spinosa*, la *Vernonia nigritiana* et la *Ceiba pentandra*;

—les oreillons: par une pâte dans laquelle apparaissent, à côté de pelures de citron sec, des écorces de *Balanites aegyptiaca* et de *Bauhinia rufescens*;

—la méningite cérébro-spinale: par une infusion tiède de fleurs de *Cymbopogon giganteus*, ou l'instillation dans l'oreille du liquide de *Lagenaria vulgaris*;

—l'œdème palpébral: par l'usage externe d'une poudre provenant du *Xylopia aethiopica*, d'une pâte où est intervenu un pied du *Mitracarpum verticillatum*, ou encore par la toilette du visage dans une infusion de feuilles de *Stereospermum kunthianum*;

—la tuberculose pulmonaire: par une médication dans la composition de laquelle apparaissent notamment des éléments du *Ficus gnaphalocarpa*, de *Xylopia aethiopica* et de l'*Aframomum melegueta*.

L'ordre retenu dans ces cinq exemples est celui des conciliances physiques, dont les formules complètes, connues, peuvent être reprises pour contrôle en labora-

toires: c'est l'ordre d'un savoir qui opère, jusqu'en cette dimension, par analogie. Et celle-ci conduit souvent à des ouvertures inattendues: par prescription des similitudes, elle instaure tressaillements et miroitements innombrables de l'analogie.

On le voit: l'élan analogique est un courant qui ne s'enferme pas en un règne, ne se réduit pas à une seule instance, et ne peut se définir en un ordre aux contours parfaitement délimités. Les exemples présentés donnent raison à Foucault qui affirmait: l'espace des analogies est au fond un espace de rayonnement.

La quatrième et dernière forme de similitude est 'le jeu des sympathies': "Là nul chemin n'est déterminé à l'avance, nulle distance n'est supposée, nul enchaînement prescrit. La sympathie joue à l'état libre dans les profondeurs du monde... Mais tel est son pouvoir qu'elle ne se contente pas de jaillir d'un unique contact et de parcourir les espaces; elle suscite le mouvement des choses dans le monde et provoque le rapprochement des plus distantes" [1, p. 38]. Foucault la montre comme principe de mobilité ("elle attire les lourds vers la lourdeur du sol, et les légers vers l'éther sans poids; elle pousse les racines vers l'eau, et elle fait virer avec la courbe du soleil la grande fleur jaune du tournesol"), la considère comme 'une instance du Même', parce que fondamentalement transformante et réductrice ("elle a le dangereux pouvoir d'assimiler, de rendre les choses identiques les unes aux autres, de les mêler, de les faire disparaître en leur individualité—donc de les rendre étrangères à ce qu'elles étaient"), mais il l'indique aussi—se référant notamment au *De la Subtilité* (trad. française, Paris, 1656), de Cardan—, comme heureusement et totalement compréhensible, que située face à sa figure jumelle: l'antipathie, cette figure qui "maintient les choses en leur isolement et empêche l'assimilation", cette figure qui "enferme chaque espèce dans sa différence obstinée et sa propension à persévérer en ce qu'elle est" [1, pp. 38-9].

Similitude fantastique qui coiffe l'analogie, la sympathie, comme l'antipathie, est la grande clé de l'univers négro-africain et particulièrement d'un chapitre important en thérapie, communément appelé 'pratiques superstitieuses et recettes magiques'. Le guérisseur est le grand maître des liaisons sympathiques, c'est-à-dire des liens innombrables et infinis qui perpétuent le Même et le reflètent; le sorcier, le possesseur des secrets de l'antipathie: il isole, détruit la souveraineté de la fraternité et de la communion. L'action du guérisseur comme celle du sorcier se déploient en fonction de ce qu'il y a d'essentiel en une communauté: la vie. La bienfaisance du premier tend à la conserver et à l'agrandir à la dimension de l'univers; la malfaisance du second à l'isoler de manière à empêcher le triomphe, dans le Même, d'une sympathie indéfiniment reflétée et qui réunirait les règnes de l'univers; le premier défend sa vie, son sang, ceux des siens, de son ethnie; le second détruit son propre sang, la vie des siens, la concorde universelle. L'un et l'autre savent comment soigner ou inoculer des maladies inguérissables, guérir ou empoisonner, empêcher ou faire perpétrer un crime, sauvegarder l'entente et la paix dans la communauté ou les détruire, prévenir ou susciter des accidents mortels, ouvrir au bonheur ou barrer quelqu'un, fertiliser les champs, le sol, l'environnement ou les dessécher; en un mot faire du bien ou du mal. Le guérisseur se

vouerait au bien, au renforcement des enchaînements sympathiques, à la promotion de la vie, de la fécondité et de la lumière; et le sorcier, au mal, à l'instauration de l'isolement, de la destructuration et de la mort. Soit donc, et d'évidence, deux 'frères ennemis', se connaissant parfaitement et dominant un savoir qui dans un cas se coule dans l'éclat du jour et s'enchaîne dans les réseaux de sympathie qui tissent l'univers afin que la vie se maintienne et s'accroisse; et dans l'autre cas, au cœur de la nuit, un savoir reconduit des refus, des négations, et empêche tout autant des complémentarités généreuses que les propensions de la sympathie.

La loi qui signifient les figures de la sympathie et de l'antipathie est, contrairement à ce que l'on a souvent affirmé dans le cas de l'Afrique, autre chose que l'expression d'un 'sens moral à peine exquissé', de pratiques 'fétichistes', et 'magiques' marquées par l'envie, la jalousie et l'égoïsme, 'caractères' qui seraient, je l'apprends naguère en des ouvrages savants de missionnaires et d'anthropologues, constants et dominants chez les Noirs. Cette loi, sous ses formes négative et positive, surgit de la nature elle-même. Dans le XVII^e siècle européen, Cardan, par exemple, en affirmait un genre de fatalité: "le rat d'Inde est pernicieux au crocodile car Nature le lui a donné pour ennemi; de sorte que lorsque ce violent s'égaie au soleil, il lui dresse embûche et finesse mortelle; apercevant que le crocodile, endormi en ses délices dort la gueule bée, il entre par là et se coule par le large gosier dans le ventre d'icelui, duquel rongant les entrailles, il sort enfin par le ventre de la bête occise" [1, p. 38]. Mais, comme l'ajoute Foucault, à son tour, les ennemis du rat le guettent: car il est en discord avec l'araignée, et "combattant souventes fois avec l'aspic, il meurt. Par ce jeu de l'antipathie qui les disperse, mais tout autant les attire au combat, les rend meurtrières et les expose à leur tour à la mort, il se trouve que les choses et les bêtes et toutes les figures du monde demeurent ce qu'elles sont" [1, p. 38]. Vibrations et fatalités au nom d'une loi magistrale: la nature s'achève et s'accomplit dans la mort et la vie qui la formulent.

Un poète africain, Birago Diop, a, pour sa part, présenté un remous singulier de la règle de sympathie. Il chante des courbes et jonctions fantastiques de la sympathie [11].

1. Ecoute plus souvent
Les choses que les êtres
La Voix du feu s'entend
Entends la voix de l'eau.
Ecoute dans le vent
Le buisson en sanglots
C'est le souffle des ancêtres.
2. Ceux qui sont morts ne sont jamais partis
Ils sont dans l'ombre qui s'éclaire
Et dans l'ombre qui s'épaissit.
Les morts ne sont pas sous terre.
Ils sont dans l'arbre qui frémit,
Ils sont dans le bois qui gémit
Ils sont dans l'eau qui coule,
Ils sont dans l'eau qui dort,
Ils sont dans la case, ils sont dans la foule:
Les morts ne sont pas morts (...)

3. C'est le souffle des ancêtres
Le souffle des ancêtres morts,
Qui ne sont pas partis,
Qui ne sont pas sous terre,
Qui ne sont pas morts.
4. Ceux qui sont morts ne sont jamais partis:
Ils sont dans le sein de la femme,
Ils sont dans l'enfant qui vagit
Et dans le tison qui s'enflamme.
Les morts ne sont pas sous terre:
Ils sont dans le feu qui s'éteint,
Ils sont dans les herbes qui pleurent,
Ils sont dans le rocher qui geint,
Ils sont dans la forêt, ils sont dans la demeure:
Les morts ne sont pas morts.
5. Ecoute plus souvent
Les choses que les êtres
La voix du feu s'entend
Entends la voix de l'eau
Ecoute dans le vent
Le buisson en sanglots:
C'est le souffle des ancêtres.

Il ne s'agit pas en ce poème, comme en d'autres du même auteur, du 'mystère de l'animisme africain' comme l'a cru Kesteloot [12]; mais de l'expression poétique d'un savoir organisé qui récite l'universalité et la généralité des fléchissements concrets de la sympathie dans une culture. En un autre poème, le même Birago Diop, désigne le 'Viatique' [12, p. 146] de l'Africain lancé dans le monde, au départ de 'doigts pleins de sang': sang de chien, sang de taureau, sang de bouc, sang—dirais-je—de trois compagnons de l'homme.

C'est la constance ordinaire de la sympathie qui éclate, répercutant les cercles des autres ressemblances et animant les fastes d'une certitude transcendant les dualismes, contradictions et oppositions de la loi d'antipathie. C'est comme un plan ultime, en tout cas un recours qui assume les violences naturelles de consommation, échanges et compensations de force vitale, à la manière où, par exemple, les Mossi l'offrent à voir. Ce n'est qu'un exemple que cette dialectique 'somatographique': la terre 'mange' l'eau, l'homme 'mange' ses biens, la rivière 'mange' qui elle cherche, la femme 'mange' son homme, etc. Et, en mauvaise part, absolument, un père ou un oncle peut 'manger' un des siens; le jaloux, son ennemi; le méchant peut se transformer en fauve pour 'manger' ceux qu'il envie, etc. De la loi naturelle—l'eau qui féconde la terre—à la gratuité apparente des conséquences de certaine rage, c'est une même lancée et ses récurrences: celles de l'antipathie [8, p. 119].

L'exercice 'thérapeutique' n'est ainsi, strictement parlant, jamais neutre [13]: le 'guérisseur' et le 'sorcier' participent d'un même sacerdoce dans la connaissance. Ils ne divergent que par leurs vocations qui répètent deux tendances de la nature et s'explicitent, pour le guérisseur, dans l'ordre des croisements qu'appelle ou peut susciter la sympathie; et, pour le sorcier, dans la gloire de la séparation et l'envers de la communion. Ce ne serait dès lors que posées en ce cadre que s'éclaireraient les missions difficiles de ces deux médiateurs—le guérisseur et le sorcier—entre la communauté des hommes et l'univers; et que peuvent s'illuminer l'usage du 'bien' et la pratique du 'mal': toute

prévention d'un mal a un envers, son injection ou la possibilité de celle-ci; tout soin, son contraire, et toute guérison, une opposition potentielle et naturelle. Si l'on peut recourir à un guérisseur pour se défaire d'une myalgie (Fari-kounmou)—cette douleur musculaire résultant de coups reçus, d'une chute ou d'un travail excessif, l'on peut également faire appel au sorcier pour la maintenir chez quelqu'un. On peut notamment à l'aide d'une poudre de termites mères, de feuilles de kolokolo (*Afrormosia laxiflora*) de mingoli (*Ziziphus jujuba*) conservée en une corne de bœuf et qui, retirée à bon escient, au bon moment, et mélangée à de la graisse et déposée, entre autres endroits, au seuil de la porte d'entrée de sa propre demeure, s'assurer qu'en cas d'infidélité de l'épouse, elle et son amant seraient punis. Enfin, il est possible, semble-t-il, de provoquer la hernie dite 'nguélé-kaya' à l'aide d'une poudre de calebasse et du *Biophytum apodiscias*, mélangée à du beurre végétal et confiée à une 'paille-fétiche' qu'on lance à quelqu'un. Mais celui-ci, en accourant chez le guérisseur à temps, peut se défaire vite du mal grâce à un antidote classique: un bain de vapeur aux vertus et senteurs de la *Lannea velutina* et d'herbes de l'argamasse.

C'est dire, grâce à ces exemples, que la séparation des fonctions entre le sorcier et le guérisseur est plus subtile que rigoureuse. Ce qui les détermine, ce sont les exigences de la sympathie ou de l'antipathie. Aussi la loi du jour et de la lumière peut-elle recourir aux artifices de la nuit pour que la sympathie s'enclenche ou se rajuste. Et l'inverse peut, en principe, arriver. Du coup, la coupure ou, plus exactement, la différenciation sévère que l'anthropologie tend à établir entre le guérisseur et le sorcier éclate et se dissout: il n'y a plus qu'un médiateur, un 'savant', soumis ou aux normes du jour et de la sympathie, ou aux exigences de l'antipathie dans le décor de la nuit; il peut, alternativement, être l'un et l'autre; ou, à des fins de convenances sociales, vouloir se réduire à l'un ou à l'autre afin de ne point disparaître en cet excessif que serait la fusion des deux ordres jumeaux: celui de la sympathie de l'antipathie.

"*Convenientia, aemulatio, analogie et sympathie*," écrit Foucault, "nous disent comment le monde doit se replier sur lui-même, se redoubler, se réfléchir ou s'enchaîner pour que les choses puissent se ressembler. Elles nous disent les chemins de la similitude et par où ils passent; non là où elle est, ni comment on la voit, ni à quelle marque on la reconnaît. Ou, peut-être nous arriverait-il de traverser tout ce foisonnement merveilleux des ressemblances sans même nous douter qu'il est préparé depuis longtemps par l'ordre du monde, et pour notre plus grand bienfait. Pour savoir que l'aconit guérit nos maladies d'yeux ou que la noix pilée avec de l'esprit de vin soigne les maux de tête, il faut bien qu'une marque nous en avertisse: sans quoi ce secret resterait indéfiniment en sommeil" [1, p. 41]. En somme, il faudrait indiquer 'les signatures', séparer la signature de ce qu'elle désigne ou nomme, poser la 'forme signante' face à 'la forme signée', et toutes deux en regard du principe même de ressemblance et de ce à quoi il ouvre, en un espace culturel et à une période donnée.

Que peuvent donc révéler, dans l'ordre du monde africain, les souffles et les fascinations de la similitude? Et sous quelles signatures?

ENTRE LA TRADITION ET LA
MODERNITÉ: LES FIGURES
DE L'AMBIGUÏTÉ

Chacun de nous, affirme Clavreul, est trop solidaire du discours médical pour ne pas en épouser d'avance les raisons. C'est pourquoi la seule critique vraiment radicale que je connaisse de l'Ordre médical est donnée par un fait que rapportent les ethnologues, parce que ce fait n'a pas à s'embarrasser de considérations mineures sur les limites et les échecs de la médecine et qu'il impose à notre réflexion ce qui résulte de la réussite de la médecine quand elle est totale [14]. Et cette question venue, nous dit-on, de l'indigène serait la suivante: 'le médecin en apportant la guérison, ne contracte-t-il pas une dette envers ceux-là même qu'il soigne?' L'origine de cette question qui permet de cerner des limites significatives de la médecine scientifique, —cette médecine qui ne peut parler de la mort que pour 'tenter d'en reculer l'échéance' et qui 'ne parle jamais de la vie et de la jouissance, si ce n'est pour la réglementer'—, est l'interprétation que Lévy-Bruhl présente dans le chapitre treize de *La Mentalité sauvage* sur le comportement d'indigènes d'Afrique et d'Amérique après une guérison: au lieu de remercier le praticien qui les a traités, soignés et guéris, ils exigeraient d'être payés, et ce serait là, estimait Lévy-Bruhl, une expression de 'la mentalité primitive'. Mais, cet étonnant comportement permet à Clavreul [14, p. 26] de déchiffrer et d'indiquer la rationalité de ce manque de civilité et le bien-fondé de la revendication: la puissance de l'Ordre médical et le 'totalitarisme' du discours médical seraient une raison suffisante. En effet: la médecine scientifique nous laisserait subjectivement divisés; 'chacun de nous est séduit, conquis, moins par ses résultats thérapeutiques que par l'étendue et les certitudes du savoir médical, et moins par celles-ci que par la permanence de son ordre au moment où notre propre corps nous abandonne'; la médecine scientifique nous réduirait au silence: 'aucune raison n'est objectable à la raison médicale, et le médecin ne recueille de son patient que ce qui peut prendre place dans le discours médical'; la médecine est tout autant discours qu'idéologie: 'Le médecin peut-il, sans se renier, abandonner son discours et faire droit aux objections de son malade, plutôt que de les réduire comme il lui en est fait obligation?' (...). Le totalitarisme du discours médical, qui est celui de sa logique, n'est pas le fait de ses clercs. Il inclut tous ceux que en connaissent au moins l'existence." Et, il devient alors possible de comprendre, rien qu'à partir de ces trois arguments, que Clavreul puisse affirmer: "l'Ordre médical est plus puissant que le plus puissant dictateur, et parfois aussi cruel. On ne peut lui résister parce qu'on n'a aucune 'raison' à lui opposer" [14, p. 29]. Dès lors, comment ne pas comprendre la revendication de l'indigène? Vous m'avez soumis à la puissance de vos phantasmes et j'ai plié, généreusement et sans condition; pourquoi ne me rémunéreriez-vous pas?

L'exigence de l'indigène peut, assurément, servir de prétexte exemplaire à pareil débat qui touche directement la signification même de la médecine scientifique et sa pratique. Elle pourrait, cependant, être orientée différemment: si elle est authentique, comment se formule-t-elle dans la culture originelle de celui qui

l'émet? [15, 16]. C'est tout le problème de la relation complexe entre soignant et soigné qui surgit: en médecine moderne, celle-ci s'affirme dans l'exclusion des positions subjectives de l'un et de l'autre, alors que dans les thérapeutiques africaines, ce serait l'inverse. Et cette position ne serait même pas particulière à l'Afrique: les théories exogènes (le déséquilibre physique est causé par une altération quelconque suscitée par une action, un corps extérieur ou étranger) l'indiquent aussi bien en Asie du Sud-Est, en Amérique qu'en Australie; dans les conceptions endogènes (la maladie est conséquente d'une diminution de la force vitale, —d'une diversion ou d'un vol du principe de la vie), elle est capitale.

C'est en cette relation que s'affirment, en claire nécessité, les divers simulacres non seulement du discours et de la pratique médicale, mais aussi la manière dont un univers culturel se qualifie. "Ce n'est pas la volonté du bien, écrivait Paracelse, que ce qu'il crée pour le bénéfice de l'homme et ce qu'il lui a donné demeure caché... Et même s'il a caché certaines choses, il n'a rien laissé sans signes extérieurs et visibles avec des marques spéciales—tout comme un homme qui a enterré un trésor en marque l'endroit afin qu'il puisse le retrouver" [1, p. 41]. Propos éminemment africain qu'on pourrait mettre en pendant au symbolisme graphique des deux ellipses concentriques des Venda du Zimbabwe: une parabole témoigne de l'extension de l'énergie depuis son apparition, un cercle effilé signifie le foisonnement éternel de la vie. Et, dans les détours des symboles [17-19], à chaque arrêt, il y a un recours discret mais insistant aux signatures et à leurs origines. —Aussi, l'ordre de la thérapeutique n'est ni ordre séparé, ni système coupé du discours du monde et de l'idéologie du milieu qui le porte: il en est intimement, jusque dans ses exercices les plus secrets et ses fascinations les plus redoutables; il inclut, de manière totale, les subjectivités des vivants, les traces des hommes et les humeurs des dieux; ses pratiques sont constituées par toute une série de relais de signatures selon des paliers innombrables: le temps, le sexe, l'initiation, le statut social, la caste etc.

C'est donc au contexte spatial et humain qu'il faut d'abord revenir: comprendre ce qu'est l'Afrique d'abord, situer ensuite en ce royaume la pratique thérapeutique en ses lumières noires et blanches, et enfin, seulement, aborder en conséquence la question des signatures. Trois 'paraboles' fantastiques, dont répond Thomas [7, Chap. III], pourraient servir de lien entre ces trois points: elles en assument les ambiguïtés en même temps qu'elles ouvrent à des rigueurs communes.

(a) Tel guérisseur diola de Basse-Casamance (Sénégal) que nous connaissons bien, fait passer la maladie de son patient dans un arbrisseau qui se met immédiatement à perdre ses feuilles. Peut-être prend-il soin, au préalable, d'en couper les racines ou de verser au pied un produit nocif. Qu'importe puisque, nous l'attestons, le malade guérit le plus souvent et en un temps record. Pouvoir magique des paroles prononcées? Efficacité des onctions/frottements sur le patient? Administration, à notre insu, d'un remède particulièrement drastique?

(b) Que penser de cette étrange cérémonie des Abidji (Côte d'Ivoire), le *diepri*, à la fois rite de purification, de renouvellement et d'offrandes. A un moment donné, au cœur de l'exaltation collective, les acteurs s'ouvrent pro-

fondément le ventre avec une lame et dansent ensuite frénétiquement tenant leurs intestins dans la main; l'effet est saisissant. Mieux encore, un simple cataplasme suffira en deux ou trois jours, pour cicatriser la plaie sans aucune intervention chirurgicale; un jeune Abidji, bien qu'urbanisé, avait voulu participer au rite de ses ancêtres malgré l'avis défavorable des vieux: le lendemain, il mourait d'une infection généralisée fulgurante; lui avait-on administré un pansement-poison ou simplement avait-il perdu la foi ou avait-il attaché trop peu de crédit aux menaces des vieux?

(c) Au Zaïre, une guérisseuse ba-luba introduit dans le vagin d'une possédée une corne d'antilope enduite d'un produit magique; elle y place un petit lézard; un homme masqué ferme à l'aide d'un tison ardent l'ouverture de la corne, ce qui a pour effet simultanément de dégager une odeur nauséabonde et de contraindre l'animal à pénétrer dans le sexe; enfin, la guérisseuse enlève la corne et obture le vagin avec un tampon végétal que fixe une lanière de cuir. A ce moment, l'orchestre s'arrête brusquement de jouer tandis que l'homme masqué répand sur la patiente un liquide blanc et sirupeux en récitant des invocations. Et la malade se lève tranquillement, parfaitement calmée, puis retourne chez elle comme si rien ne s'était passé. Faut-il parler de simulation? Mais qui simule? la (pseudo) malade? la guérisseuse? En tout cas, l'illusion théâtrale semble parfaite (au fait, qu'est devenu le lézard?). Il n'est pas non plus interdit de songer à une guérison effective de l'hystérie par la magie du symbole rituel. Une chose est certaine: les assistants et probablement la malade croient à cette guérison.

C'est cela 'aussi' l'Afrique, et, très probablement, de manière principale; une Afrique apparemment en retrait face à la présence et au prurit de 'la modernité'. Certes, derrière l'expression 'Afrique moderne', ce que l'on peut voir et comprendre, c'est l'arrangement de l'espace continental qui est le fait des colonisations et, pour quelques rares territoires, d'une relativement libre intégration dans les projets et rêves techniques de l'Occident. Et l'expression désigne, en général, les conséquences de cette organisation ainsi que la prolifération de nouveaux besoins. Elle renvoie d'ailleurs, au premier titre, à quelques métaphores: Accra, Abidjan, Brazzaville, Dakar, Dar-ès-Salaam, Kinshasa, Lagos, etc. c'est-à-dire à des signes dont la ressemblance de stature, l'identité des fonctions, la similitude des mécanismes couvrent une même vocation. Et par celle-ci, l'on a pu dire et croire—souvent un peu rapidement—que ces signes imposeraient progressivement, mais radicalement, une élimination ou une révision, en tout cas une neutralisation des normes et principes directeurs de l'Afrique 'ancienne'. Il est évident que, singulièrement sous l'époque coloniale, les 'pôles de la modernité' ont enclenché un processus de reconversion des structures majeures de l'esprit: l'exigence de la règle comme règle, la notion de réciprocité et le caractère synthétique du don qui change des individus en partenaires.

Mais ces signes de la modernité présente de l'Afrique sont-ils vraiment coupés des traditions antiques? On a, parfois, répondu oui ou non sans toujours apporter des faits et preuves convaincants et incontestables. Des éléments de réponse pourraient, notamment, provenir d'études qui envisageraient le statut des contradictions et des écarts des symboliques ethniques en ville africaine par rapport à l'économie originelle en fonction dans l'arrière-pays: soit, d'un point de vue structural, en nommant rigoureusement le

système culturel et le type de rapport d'échanges qu'il permet; soit, d'un point de vue sociologique, en cernant et en épinglant le rapport social d'échange actualisé en procès réversible de réciprocité dans des communautés ethniques du milieu urbain; soit, enfin, d'un point de vue psychologique, en analysant ce rapport comme registre psychique de l'échange, de la réciprocité, et de l'altérité [20].

En fait, pareilles perspectives indiqueraient assurément une évidence: d'abord, le fait d'une réorganisation progressive des rapports nature-culture; ensuite, l'impossibilité de nommer 'l'Afrique moderne' hors du miroir de l'acculturation, suscitée par la 'présence africaine' de l'Occident. De là à envisager que la signification de l'Afrique s'achève dans les lumières de l'acculturation et que sa vocation actuelle consisterait à se laisser recouvrir par la culture euraméricaine, il n'y a qu'un pas que certains sociologues et spécialistes de la prospective n'ont pas hésité à franchir. Il n'est pas certain du tout que l'Afrique s'épuise réellement en cette cohérence qu'indiquent d'ailleurs, et même frénétiquement, des études savantes sur les structures économiques et socio-politiques des pays africains. Et même, et comme à l'envers de cet angle de vue qui, parfois, situe l'organisation des formations sociales africaines à un point donné d'une échelle dont la norme de lecture et d'appréciation est incarnée par le canon de la structure euraméricaine, il est probable que l'on se trompe, lorsque, comme le font nombre d'anthropologues, on désigne l'ordre symbolique des milieux africains par référence à une seule fonction. L'on reconduit ainsi le mythe de l'existence de deux Afriques parallèles: d'un côté, une Afrique urbanisée soumise à la rationalité moderne, aux valeurs et manières occidentales; de l'autre, une Afrique enfermée en des tracés anciens et qu'actuellement, il est d'usage et de bon ton de dénommer l'Afrique 'traditionnelle': en cette étendue insolite appelée à disparaître devant l'extension de la première, le rapport social d'échange—et donc le titre majeur de réversibilité—s'annoncerait à partir de la pratique d'une fonction symbolique absolument pure et non corrompue par l'acculturation avec l'Occident. Position extrême donc, ici aussi.

Les signes de l'Afrique ne délivrent absolument pas une image unique, et même pas une seule cohérence; mais en des ardeurs fulgurantes, des commodités et des figures variables qui dérivent surtout des racines séculaires. Même les signes de la modernité attestent en leurs signifiés des valeurs qui, non comprises par référence aux racines de l'Afrique-mère, seraient, à vue, parfaitement absurdes. Les rigueurs contraignantes de la présence coloniale avaient fait refluer fortement les marques et les feux des apports des sources. Il n'est, cependant, pas certain du tout que dans les oasis purifiées, appelées par les colonisateurs à éteindre 'l'Afrique sauvage', ne souffle que l'air de la raison technicienne et commerçante à l'occidentale. En entrée, à un bilan de recherches sur la pratique médicale traditionnelle dans la ville de Kinshasa, Bibeau et Corin posaient naguère la complexité et l'ambiguïté de la ville africaine elle-même: "Kinshasa a de nombreux visages et tous n'ont pas le même degré de visibilité. Sous le flux de la circulation et au-delà des grands buildings et de l'affairement des gens qui vaquent à leurs occupations, on pressent

l'existence d'un autre niveau de réalité, qui est le vrai lieu de la vie et des valeurs à Kinshasa. La plupart des étrangers ne connaissent pas cette vie ou n'ont pas pu la pénétrer, passant ainsi à côté du cœur de l'Afrique de Kinshasa; ils ne la pressentent que de biais, à travers une série d'indices dont la présence parle d'une autre forme d'existence mais sans que leur caractère fragmentaire permette d'en appréhender le contenu: le son des tambours et des hochets qui rythment, certaines nuits, des réunions tenues sous de grands arbres et dont l'importance est attestée par la gravité des visages, des personnes croisées dans la rue, le visage ou le corps enduits de rouge ou de blanc. Pendant de longues années, les intellectuels africains eux-mêmes se sont détournés de ces signes de la tradition qui leur semblaient évoquer ce dont toute leur 'éducation' leur avait permis de se dégager; c'est comme si, confrontés à ces signes, ils en mettaient entre parenthèses le sens dans leur propre existence" [21]. L'expérience silencieuse que nomme ce commentaire ethnologique à l'usage de l'étranger dégage de la ville africaine la persistance d'une dimension essentielle qui la relie à l'Afrique 'traditionnelle'. Et cette expérience, tout autant pratique que savoir, s'accomplit comme norme et système de régulation de la vie, s'explicite en des règles et reprises d'un horizon insistant. — Et, à en croire certains spécialistes, il n'est pas jusqu'aux Africains les plus acculturés et les mieux intégrés dans la culture occidentale qui ne risquent un jour ou l'autre de se surprendre, étonnés et impuissants, enfermés dans les mailles de la tradition profonde [22-23]. Ainsi dans l'exemple suivant présenté par Thomas:

"Un interne en médecine gabonais, séjournant en France, complètement affranchi et fort sceptique vis-à-vis des coutumes et croyances de son ethnie, fut littéralement épouventé un soir en rentrant de son service à l'hôpital. Sa jeune femme qui ne buvait jamais absorbé les trois quarts d'un litre de rhum; métamorphosée, elle s'était mise à ressembler de façon incroyable à sa grand-mère alcoolique; elle était sa grand-mère: mêmes traits, mêmes gestes, même voix; et celle-ci exigeait que sa petite-fille, censée la réincarner, rentre immédiatement au village pour y subir l'initiation afin de reprendre ses autels après sa mort. Ce qu'elle ne manqua pas de faire, accompagnée de son époux" [7, p. 99].

Ainsi donc, comme le supposerait ce cas, l'on serait en droit de poser pour les Africains, sans distinction de cadres (moderne ou traditionnel), le principe d'une loi générale, souterraine, insistante. Celle-ci informe certes plus ou moins visiblement les milieux, fonctionne comme une ontologie qui, souverainement, dit et définit l'être, indique ce qui l'anime, le promeut et le détruit. Les séparations nouvelles introduites dans les sociétés africaines ne seraient qu'en surimpression. Les hommes demeurent les produits et les fruits d'une région et d'une conception. Si bien que leur être, leur vitalité et leurs symboles demeureraient, encore largement, soumis à la validité d'une loi muette mais impérative, omniprésente. On voit lors un dynamisme discret mais net traverser presque de bout en bout le rêve et l'existence de l'Africain [22, Chap. 13-14], et expliquer l'homologie de niveau qui s'établit, presque naturellement, entre 'le contenu' d'un accident (au sens général de: 'ce qui survient'), une 'demande' de correction ou d'interprétation du fait et 'la norme'

qui, en réponse ou en référence, conclut, afin de couvrir et de dépasser "le gouffre qui se creuse entre l'imprécision du signifiant et la spécificité du signifié" [24].

Et c'est singulièrement en cas de maladie ou d'un déséquilibre physique que cette 'béance' doit être comblée au mieux: la maladie est, en effet, fuite de vie, diminution de force et annonce d'une désintégration possible de l'individu ou même de la communauté dont il est membre. Il existe une hiérarchie dans les maux, mais ils sont tous, et, simultanément, 'signe' d'un décrochement de l'espace de l'existence et d'un ordre de génération, et 'signifiant' de relations et dépendances complexes avec l'ordre du monde. Ainsi, ces témoignages repris au Dr. A. Retel-Laurentin [15, pp. 23].

1. Premier cas: les femmes de Sana

(a)—La deuxième épouse de Sana, un Nzakara, est malade: elle a été 'prise' à la main. Le médecin l'observe: "un phlegmon de la main, qui dégénère en un monstrueux gonflement à l'avant-bras". Opération, soins, elle est guérie. Reconnaissance sincère de Sana à l'égard du médecin. Il y a autre chose: sa première femme perd tous les enfants qu'elle conçoit.

Le dimanche suivant, le médecin surprend Sana chez le devin Bagui. Il détaille ses misères: "tout d'abord, ma première épouse a été atteinte dans tout le corps. Elle n'a pas mis d'enfants au monde: ils sont tous tombés dans le sang. Quand j'ai vu que ma deuxième femme était 'prise' à la main, j'ai compris que ces malheurs n'étaient pas venus tout seuls".

(b) L'ordre des causes:

—pour la première épouse: la colère d'un génie, Gous-soulouma; ce génie avait déjà frappé l'une des belles-sœurs de Sana qui avait négligé de reprendre et d'honorer son autel à la mort de sa mère. Consulté, l'oracle avait demandé à la première épouse de Sana et à sa sœur de rétablir l'autel abandonné et d'honorer plus attentivement le génie. Mais elle ne le firent pas, vraisemblablement sous l'influence de Sana qui est 'chrétien'.

—pour la deuxième épouse: bien que 'déjà' guérie par le médecin, un danger permanent pèse sur elle: elle a été envoûtée par un 'étranger' qui habite le village; Sana le reconnaît: "il y a, dit-il, un an, un étranger s'est présenté. Il voulait travailler un champ dans notre village. Son clan est allié à celui de ma deuxième épouse. Aussi l'ai-je bien accueilli. Il a fait des avances à ma femme qui, par crainte de moi, les a repoussées. L'homme l'a menacée. Or certains disent qu'il est sorcier (*mbe-mangou*)". Et la sanction du devin tombe: "ta femme ne guérira que si tu mets fin à l'action néfaste de cet étranger".

(c) Interprétation du Dr Retel-Laurentin:

—"Médecin, je regarde ces hommes qui m'ont parlé avec simplicité comme à un des leurs. A aucun moment, ils n'ont cherché à dénigrer l'action du médecin. Et pourtant, je ressens comme une blessure (...). D'un côté, ils acceptent et même ils sollicitent les instruments de chirurgie et les antibiotiques. De l'autre, les magiciens, les 'poisons' et les ancêtres semblent avoir le dernier mot, le mot décisif, en tout cas.

"Dans l'esprit des Nzakara, on trouve la cause d'une maladie en remontant à l'intervention d'une force invisible: ainsi, le Gousoulouma est la cause première de la maladie de la première épouse. A moins qu'il faille rechercher l'action néfaste d'hommes, détenteurs d'un pouvoir spécial, les sorciers ou les magiciens qui cultivent des plantes aux effets toxiques ou bienfaisants selon le sens du vœu prononcé, et tel est le cas de la deuxième femme de Sana. Dans ces conditions, l'acte médical ne peut agir sur la cause profonde de l'affection. Même s'il guérit en apparence, le mal

demeure, latent, mais réel, tant que sa cause n'est pas supprimée."

Cette mise en forme d'un cas dévoile la solidarité d'enchaînements et de causalités caractéristiques: les aménagements et les exercices d'une liberté s'opèrent en une étendue spacieuse selon les similitudes de la sympathie et les revendications de l'antipathie. La détermination d'une cause de maladie relève de l'ordre de ce régime que comprend et maîtrise le devin-guérisseur: un tableau du monde avec des éléments et des espèces, des fonctions et des tendances qui interfèrent, se complètent, s'annulent ou se détruisent; et les vivants, chacun selon sa spécificité, prennent place en cette hiérarchie selon des normes culturelles précises: le sexe, le statut social, l'ordre de parenté et le rang d'appartenance à une généalogie remontant à l'origine de la communauté et aux sources de la vie. Dans la maladie, deux plans se superposent, celui des causalités de surface, immédiatement perceptible et sur lequel opère, efficace, le médecin moderne; et celui des causes profondes qui déroule et délivre une hiérarchie interne et les conciliations positives ou négatives des forces: c'est le lieu de la respiration essentielle du devenir de 'la communauté' et du 'monde'; et s'y opposent la nuit et le jour, la mort et la vie, le sorcier et le devin-guérisseur.

Le Dr Retel-Laurentin s'étonne de ce que le devin Bagui ne parle pas "de l'arrivée du médecin chez Sana au moment précis ou l'état de sa femme était si inquiétant qu'on craignait sa mort prochaine?" C'est, situé en référence à la positivité de la pratique thérapeutique de la médecine "scientifique", le projet idéologique de cette médecine: d'avoir valorisé et inscrit en un plan d'histoire la pratique médicale sous le signe d'un instinct de guérir afin de 'conserver' l'individu, alors que pour Bagui, cette conservation ne paraît s'imposer comme nécessité qu'en son rapport avec la continuité d'un ordre de sympathie, celui du maintien et de l'accroissement de la vitalité de la communauté, de l'ethnie, de l'espèce. L'articulation de l'instinct de la thérapie comme principe de conservation de l'individu ne serait réellement rentable que si celui-ci était profondément isolé, hors cadre. Le Dr Retel-Laurentin l'indique: "l'action du médecin a été efficace, tant qu'il était là, mais Sana sait que sa femme restera exposée à la maladie aussi longtemps que le magicien ne sera pas mis hors d'état de nuire". Du coup, ce qui éclate, ce sont deux perspectives d'action thérapeutique: le médecin cherche et combat la cause de la maladie en s'attaquant à des microbes ou à des parasites 'invisibles'; le devin-guérisseur en affrontant la violence d'antagonismes 'occultes', soit en barrant le chemin à la malfaisance des sorciers, soit en réconciliant l'individu avec les mânes.

2. Deuxième cas: la hernie de Mada

(a) Mada, un notable Nzakara, est profondément religieux: il entretient avec dévotion deux autels, l'un en l'honneur du "génie de la chasse", et l'autre pour les ancêtres. De bonne santé, vigoureux, il souffre cependant d'une hernie et, malgré l'insistance du médecin, hésite à se faire opérer. De passage dans le village, le médecin le trouve un jour alité: "un examen rapide de sa hernie montre qu'elle est solidement étranglée. Il faut l'opérer d'urgence, (et le) transporter immédiatement à l'hôpital". Mada traîne. Le médecin, impatient, s'avance vers la case et remarque "des brins de paille qui semblent avoir été récemment jetés à

terre devant la porte". L'intervention aura lieu. Elle réussit. Mada est sauvé. Et le médecin se considère comme le guérisseur providentiel: s'il n'était pas passé dans le village justement ce jour-là!

(b) L'ordre des causes:

Pour conjurer le mal que le rongait, Mada avait consulté un devin. Homme aimable, respectable et religieux, qui pouvait chercher à lui nuire? C'est Zagui, l'Etre-Suprême, qui serait responsable, lui apprit le devin. Mada suivit le conseil de l'oracle et offrit des offrandes à la divinité.

Mais le mal empirait. Pourquoi? Quelle explication offrir? Que faire? Mada pensait consulter à nouveau le devin, lorsque le médecin intervient, le pressant de rejoindre l'hôpital le plus rapidement possible. D'où, son hésitation. Religieux, avant de se soumettre au médecin, il prit le parti de "procéder à une cérémonie propitiatoire avec les fameux brins de paille jetés à sa porte, afin d'apaiser la colère de Zagui, sinon l'opération ne réussirait pas".

(c) Interprétation du Dr Retel-Laurentin:

"J'imaginai un médecin en France, auprès d'un malade qu'une anémie grave mettrait en péril de mort. Il commencerait par faire effectuer une transfusion, sans laquelle le malade ne supporterait pas l'intervention chirurgicale qui pourrait le guérir. Au fond, Mada n'avait pas agi différemment. Il avait d'abord fait une cérémonie pour calmer la colère de Zagui, analogue à la transfusion de l'anémie, en faisant répandre à terre les brins de paille éparpillés devant sa porte, sinon l'intervention chirurgicale n'aurait pas réussi.

"Seule différence (avec les croyances européennes). L'hostilité de Zagui était la cause première du mal; la réussite de l'intervention, le signe de réconciliation".

Cas exemplaire qui dresse en un face à face saisissant le signifiant de l'homme en ses liaisons secrètes avec le firmament et la force suprême, celle de Zagui, "l'Etre-Supérieur, celui qui réside au-delà du monde des esprits, très haut et très loin, et qui ne se manifeste aux hommes qu'indirectement". Mada, homme de bien, sans ennemis, parfaitement religieux, ne pouvait, pour son mal, que tenter d'enrayer des discords possibles et invisibles dans la direction de la pulsion fondamentale, afin de retrouver un rythme biologique conforme à la sympathie universelle. L'on penserait: bien sûr, l'oracle savait que Mada était religieux; incapable de guérir le mal réel, ne connaissant aucun ennemi à ce notable respectable, aimé et vénéré par tous, il s'en tirait hypocritement en chargeant la divinité. Oui, le devin devait savoir la réputation de Mada, ses moeurs, sa dévotion, sa sagesse et l'harmonie dans laquelle il vivait: elles ne désignaient pour lui et ne semblaient pouvoir lui indiquer aucune pulsion de la mort. En renvoyant le mal de Mada à la divinité suprême, il ne jouait ni ne trichait, mais invoquait le seul affrontement où le jeu des contraires et des oppositions innommables aurait pu altérer ou défaire les mailles de la sympathie. Le diagnostic rendu est clairement culturel: il pose la norme de la conciliation dans l'unité des commencements, l'obligation d'une intégration décisive et sincère dans l'ardeur et l'esprit de Zagui, l'Etre-Suprême.

La 'morphologie' de la divination introduit directement à l'aventure de la thérapie: rôle et significations respectifs du guérisseur et du patient, les procédures de mise en place d'abord, celle d'ouverture à la guérison ensuite qui supposent, pour la réconciliation du malade (la santé retrouvée, c'est-à-dire l'allongement

de la voie vers la mort), un sévère contrôle du 'désir' et du 'plaisir'.

Claude Bernard conseillait de veiller à "ne jamais avoir l'oeil humecté par les passions humaines". L'éthique médicale moderne, s'inspirant des prescriptions antiques d'Hippocrate et, davantage probablement, de la leçon contenue dans la 'prière du médecin' de Moïse Maïmonide (1135-1204) tourne autour de trois principales règles [25].

— se placer toujours dans l'optique du malade, se rappeler que le médecin est fait pour le malade, non le malade pour le médecin; c'est la règle d'or, celle qui sert de référence dans chaque cas particulier;

— veiller à toujours maintenir le niveau de sa compétence, tant sur le plan scientifique que psychologique et psychosomatique;

— défendre son indépendance.

Ces règles ressortissent à une 'morale', à une 'perspective moralisatrice' qui justifieraient à la fois 'l'ordre médical' comme ordre naturel pour le maintien de l'instinct de conservation et instance de référence suprême pour les conflits éventuels qui peuvent surgir à propos ou à l'occasion d'une déstructuration du corps humain (maladie) ou des investigations en vue de la prolongation du circuit vital: quelle vérité offrir au malade et dans quelle mesure respecter correctement le droit à l'information? jusqu'où accepter l'essai thérapeutique et l'expérimentation sur l'homme comme recherche *in vivo*? quelles formes de tentatives autoriser à l'étude pharmacocinétique? Mais, à la racine de cette éthique médicale, souveraine et sourcilieuse, il y a, froid et désespérément vibrant, un refus horrifié du désir et du plaisir qu'on peut comprendre comme expression de ce que Freud appela la recherche d'un état de moindre tension. Clavreul reprenait, récemment, des métaphores éclatantes qui crient l'ambiguïté de ce refus du désir: Hippocrate, le père de la médecine moderne, au temps où il officiait à Cos, se découvrit incapable de guérir Avlavie, la fille de l'un de ses confrères; il l'envoya chercher remède et consolation auprès de l'oracle de Delphes; celui-ci la renvoya dans son pays et lui promit de retrouver la santé et de revoir Hippocrate...; ce qui arriva: ils se revirent, s'aimèrent, se marièrent et furent heureux; — il y a, à l'époque de la fondation de la psychanalyse, une autre métaphore brûlante, le cas du Dr Breuer: il s'était épris d'une belle malade, Anna O., à l'intelligence vive, et ne pouvait s'en détacher; alarmée, Madame Breuer emmena son mari à Venise... Anna O. fit une grossesse nerveuse, mais Madame Breuer revint du voyage enceinte. — L'exclusion du désir, qui est à l'envers de ce qu'ouvrent ces métaphores, permet à la médecine, d'une part de mettre entre parenthèses toute subjectivité dans le rapport entre le praticien et le patient; d'autre part, d'actualiser cette relation comme 'une technique': il s'agit, en effet, d'appliquer un savoir, rigoureusement et avec le meilleur 'niveau de compétence' possible; le malade est une manière d'objet obscène ou ravissant mais devant toujours se disposer, calme et soumis, face au regard du médecin qui, pour son bien, le jauge et estime, par l'analyse des réflexes complexes, l'avancée du traitement, la sûreté de la promesse de guérison ou les étapes successives de la déstructuration du corps. Un dieu souverain et asexué a pris le malade en charge: celui-ci est comme

un enfant égaré et qu'accueillerait un père, à la fois bienveillant et omnipotent. Il a pris l'enfant en mains, avec le sourire certes, mais durement; il le confine, pour son bien et son espérance, dans la nuit d'une chambre sans écho. Et l'enfant s'est soumis: attendant, à heure nommée, le passage de ce dieu-père inaccessible malgré sa tendresse sincère, maître de sa vie et de son espérance, pour lire dans ses yeux une promesse de liberté totale ou partielle à l'air libre, entendre le miracle qui le ramènerait à sa véritable famille et à sa liberté, ou se voir signifier, pour toujours, la condamnation à la nuit de sa chambre. Et aucun désir ne surgirait vraiment en cette relation atroce? Si, mais alors, et le plus clairement, sur fond d'exclusion du désir que le pouvoir instaure et affirme [14, p. 99; 26, 27].

C'est, semble-t-il, dans les formes thérapeutiques africaines, autre chose: l'arrogance d'un désir, mais un désir intégré dans les jeux de la vie et des trajectoires de filiations sociales, qui s'impose: un ordre culturel prend en charge cette garantie de la liberté, en surveille l'exercice, l'oriente, afin qu'il débouche sur la réconciliation des éléments désunis et des forces dispersées. On peut retenir, à titre d'illustration, quatre formes de divination thérapeutique qui, toutes, comme l'ont bien vu Corin et Bibeau, se localisent à l'intérieur de deux pôles: les formes qui imposent au sujet une interprétation culturelle de son mal et celles où c'est le sujet qui indique lui-même le conflit qu'il perçoit à l'origine de sa maladie [21, p. 53].

1. Une interprétation culturelle s'impose: 'divination-lecture'

— (a) Divination par la tarentule dans le Haut-Zaïre et Equateur "Le principe du procédé est le suivant. Le soir, le devin pose une question qui introduit à une hypothèse explicative, par exemple: 'le mal vient-il du côté maternel?' En même temps, il plante un petit bâton à l'entrée du nid de la tarentule ou sur un chemin qu'elle a coutume d'emprunter. La position du bâtonnet le lendemain matin, position qui est fonction du passage de la tarentule, indique si l'hypothèse posée était fondée ou non" [21, p. 53; 22, p. 146].

— (b) Divination par le benge chez les Azande [22]. "Le benge est un procédé de divination dans lequel l'opérateur administre à une volaille une poudre végétale contenant de la strychnine. Le comportement de la volaille empoisonnée est alors interprété par le devin [10; 22, p. 145].

2. Le sujet cherche et indique la cause du conflit: 'divination-interprétation'

— (a) Le rite "zebola" du Haut-Zaïre. "Dans le Zebola, c'est à travers la bouche de la malade elle-même que s'effectue l'explicitation du processus étiologique en cause dans la maladie. C'est en effet sa voix qu'emprunte l'esprit Zebola pour révéler sa présence en elle en se nommant et pour indiquer l'ensemble des circonstances qui ont amené son intervention" [21, p. 53].

— (b) Divination-maïeutique. En relève le cas de Mada cité précédemment: le devin Bagui l'interroge patiemment et c'est, lentement, en cherchant, que le sujet amène la vérité à jour en nommant, grâce au talent du devin, les causes profondes de ses malheurs. — Le 'Nkita' [21, p. 54] du Zaïre est une autre illustration de ce genre de divination-maïeutique: "le problème posé au devin concerne généralement l'ensemble de la famille, la maladie du sujet n'étant alors que le point ultime d'une série de maux et de malchances qui ont frappé cette famille et qui invitent à penser qu'il existe en elle divers conflits et des tensions qui mettent le groupe et ses membres en danger. Dans ce contexte, c'est n'importe quel membre de la famille (ou même,

à l'extrême, de l'assistance, bien que ceci soit plus rare), qui peut tomber en état de possession et révéler les choses cachées, lors de la cérémonie de divination organisée la nuit autour d'un feu. Ce que nous retenons de ce procédé divinatoire est le fait, que, comme dans le cas des Zebola, c'est quelqu'un qui est directement concerné par le conflit à élucider qui est le médium à travers lequel la vérité se fait jour" [21].

La divination n'est pas, au propre, une thérapie mais l'éclaircissement préalable qui, explicitant les énigmes d'un déséquilibre ou d'un manque, permet, par fragments, l'énonciation de la cause et de la raison. Un peu, à la manière de la quête saisissante de Socrate dans le *Charmide* de Platon. Pour que la vérité surgisse, Socrate ne peut, comme le dit excellemment Clavreul, qu'engager Charmide dans une maïeutique où il pourra retrouver la sagesse perdue de son corps, à la faveur de son désir de sagesse qui se confond avec le désir tout court [14, p. 94].

La divination sanctionne, en effet, un diagnostic à double face qui postule deux thérapies; une thérapie psychosociale qu'elle assume déjà par elle-même mais qui va se parachever ailleurs: sur les lieux du conflit même (village, famille, etc.) et une thérapie somatique que le devin-guérisseur prend généralement, mais pas toujours, en responsabilité, selon des rites précis, en raison des affections et de leur importance. Il arrive, comme en ce cas observé à Kinshasa, que le traitement du guérisseur comporte une thérapie psychosociale: "une femme tombe malade à la suite d'un adultère... Le guérisseur soigne toujours de façon médicale les symptômes de la maladie mais son traitement comporte aussi une séance de réconciliation publique entre la femme adultère et son mari et un sacrifice à l'autel des ancêtres" [21, p. 55].

—Le plus souvent cependant, la thérapie psychosociale a lieu dans "le milieu de la vie" du malade et comprend quatre moments: les imprécations et l'expulsion de l'esprit du mal, la confession du malade, sa purification et sa réconciliation avec les siens et l'ordre des choses. Et la thérapie médicamenteuse, somatique ou psychosomatique—ainsi le traitement infligé par une guérisseuse luba à une possédée, cité plus haut—n'est qu'un complément à la stimulation et au 'happening' psychosocial au cours desquels une communauté, sous la maîtrise du devin-guérisseur ou du Père de famille, prend en charge son malade, démêle et assume ses conflits, qui sont aussi les siens, et, avec lui, par l'exploration d'un domaine de violences et d'illusions secrètes, nomme les éléments de discorde, leur oppose les termes de la vie, les figurations de la jouissance et de l'harmonie, et accomplit enfin, dans une réconciliation retrouvée, la loi de la sympathie.

Champ vaste que celui de la divination-thérapie et dont les formes presqu'infinies—les ordalies, la géomancie, l'interrogation du cadavre [8, pp. 28-30].

—pourraient se réduire à deux genres, en raison du statut qu'y vit le devin-guérisseur: dans le premier, c'est, face au déséquilibre, l'établissement d'une signification qui se place au cœur de l'avènement de la divination; dans le second, la révélation de cette signification: d'où, deux principales sortes de médiateurs: le devin-interprète et le devin-messager [7, p. 106; 28, p. 148], l'un et l'autre, miroirs de l'harmonie du monde parce que l'un et l'autre sont des

lieux de révélation des secrets et de la volonté des divinités, des efforts et de la jouissance des ancêtres, des méandres de la passion et des plaisirs des hommes. En eux, comme dans le corps fantastique de la sorcellerie, se distribuent trois grandes fonctions pour la cohésion sociale: une fonction d'explication du mal, une fonction de contrôle des pulsions libérées et enfin une fonction d'homogénéisation [7, pp. 126-9].

Face au mal, à tout malheur, il y a toujours un pourquoi qui surgit, angoissé et désespéré: au guérisseur de tenter une explication. La violence est, à sa racine, muette et toujours obscure. Lorsqu'elle éclate en pleine lumière, elle perturbe la vie et l'ordre des choses. Pour l'annihiler, le devin-guérisseur dissociera toujours deux plans majeurs. Le premier, de surface, le 'niveau réaliste', sur lequel des effets donnés répondent à des causes déterminées et relativement précises, est le niveau des équivalences premières que peut, en principe, rétablir aisément la 'science' du guérisseur (ou du médecin) avec le secours d'une thérapie médicamenteuse ou d'une intervention psychophysiologique. Toutefois, pour que cette opération soit pleinement positive, le guérisseur-devin se doit de s'attaquer à la cause profonde, occulte. Les exemples les plus significatifs de cette seconde quête concernent les interrogations de cadavres [30-32]: il faut trouver une 'explication profonde' à la mort, surtout celle d'adolescents et d'adultes en pleine vigueur. Et l'interrogation du cadavre est une forme d'autopsie qui efface le doute: "les phénomènes paranormaux, qui se remarquent souvent lors des enterrements, font l'objet d'interprétations qui convergent vers la détermination de la cause ultime de la mort, et élucident ainsi son mystère. Pour le moins, ils guident le diagnostic du devin" [30, p. 47]. Il y a une deuxième fonction qu'actualisent les performances du devin: le contrôle des pulsions que libère la sorcellerie: "Les accusations de sorcellerie aident indiscutablement à décharger une agressivité trop longtemps réprimée, une tension trop durablement contenue; sa fonction cathartique ne fait aucun doute. Ainsi déplacées, jouées, les oppositions tendent, sans toujours y parvenir, à se résoudre sur le plan de l'affectivité: le groupe doit nécessairement se choisir un bouc émissaire sur lequel va se polariser l'agressivité" [7, p. 127]. Violence organisée et contenue donc, et non pas sombre errance du mal. Certes d'un côté, le sorcier la suscite avec conviction, plaçant avec compétence pour un retour au chaos; mais face à lui, le devin-guérisseur la ravit pour la canaliser: la violation de la loi ou de la nature, suscitée ou couverte par le sorcier, s'étendue comme assainissement des structures sociales. 'Violence organisatrice', donc, selon l'expression de Thomas, mais liée intimement à l'efficacité symbolique qui est, aussi, le projet des prescriptions et lectures thérapeutiques du devin-guérisseur. —Enfin, troisième et dernière fonction, 'la régulation homogénéisante'. La sorcellerie la nie par son fait et sa propre épaisseur: la sorcellerie est, en effet, appel vers l'extraordinaire, l'inattendu, l'exceptionnel. Elle se pense et se vit en l'exercice de pouvoirs et de capacités 'impossibles' et 'impensables', c'est-à-dire ne relevant ni de l'harmonie des choses, ni des normes sociales; pour image: l'hybris grec. Aussi conquise ayant un peu trop de chance ou des succès particulièrement aisés, tendra-t-elle, de lui-même, de

peur d'être considéré comme sorcier, à réduire ses performances. Et comme à l'envers de ce processus, le devin-guérisseur invite, en cas de conflits, au surpassement de l'individu, à l'explosion de la violence: il désignera au malade 'son' sorcier et le poussera à l'affronter. En ce cas, ce qu'annonce la thérapeutique, c'est une régulation homogénéisante. Ainsi, pour reprendre, à titre d'illustration, le cas déjà cité de la deuxième épouse de Sana: pour qu'elle se rétablisse définitivement, son époux devra affronter le 'sorcier étranger' récemment installé dans le village et, en un exorcisme public, s'attaquer à sa puissance excessive et détruire sa force.

Ces trois fonctions de la thérapie—explication, contrôle des pulsions, et homogénéisation sociale—nous ramènent au point de départ, l'acte médical et ses implications pour le praticien et le patient. Dans le contexte de l'interprétation africaine présentée, il s'évanouit dans l'éblouissement du corps social. La vie qui tremblote au lieu de scintiller se dit, se vit et s'assume dans la pesanteur d'une communauté et d'un monde. C'est, comme pour ainsi dire, la loi de l'espèce et de sa continuité qui s'affirme, première et assurée, parce que loi naturelle. La position du malade, la thérapie qui allie fermement le corps, l'esprit du patient à la société et à une explosion suscitée et contrôlée des conflits, indiquent le privilège accordé à la communauté, en somme à 'l'espèce'. Donc, une thérapie fondamentalement différente de celle de la médecine moderne qui, a-t-on pu écrire, "loin de s'inscrire dans la ligne d'une tendance 'naturelle', se pose au contraire comme rupture par rapport à cette tendance, en privilégiant le destin de l'individu contre celui de l'espèce. Il suffit de voir comment les idéologies racistes, quand elles sont au pouvoir, s'empres-sent de renverser cette tendance en instituant l'élimination des individus non conformes à l'idéal de la race" [14, p. 49]. Tentation que la thérapie africaine écarte en son essence même et qu'annihilent d'une part, dans l'ordre de l'antipathie fondamentale, la lutte éternelle du sorcier et du devin-guérisseur; et d'autre part, pour la permanence de la loi de sympathie, le psychodrame et le 'happening' dans lesquels, à propos de toute maladie, mort ou désordre, la communauté entière est entraînée et pliée aux figures du désir, aux relais de la nature et aux velléités des contradictions sociales.

Que voilà donc les signatures qui s'offrent, comme d'elles-mêmes, au bas des textes africains. Le monde du similaire, disait Foucault, ne peut être qu'un monde marqué [1, p. 41]. Les corpus thérapeutiques s'articulent au départ et en fonction de la pertinence d'une parole: celle des mythes de fondement, chiffres qui récitent le surgissement de l'homme comme être de désir sur fond de similitudes d'ordre divin.

CONCLUSIONS: LES PARFUMS D'UN JARDIN

Face à la thérapeutique africaine, les premières réactions sont, singulièrement de la part de médecins et spécialistes des sciences naturelles, critiques. Il y a d'abord, irritant, le fait des manipulations dangereuses des poisons libérés. Ainsi, par exemple, le *Strychnos icaja* qui, chez les Kongo (Zaire), entre dans la composition des remèdes de stimulation psychologique ou d'accroissement de la virilité est un poison

foudroyant; le *Cannabis sativa*, utilisé en des drogues calmantes, notamment en Afrique de l'Ouest, est un stupéfiant; l'*Erythroleum guineensis*, dont les éléments sont couramment employés tant en Afrique de l'Ouest que dans les régions équatoriales, contient des alcaloïdes dont certains, telle la coumagine, sont extrêmement nocifs. Mais il y a plus: explorateurs et missionnaires ont livré aux sarcasmes les devins, guérisseurs et autres sorciers: les effets inimaginables de l'accoutrement de ces 'messieurs les guérisseurs', l'incohérence des scènes de guérison, le caractère grotesque de la divination... Tout cela, a-t-on écrit abondamment, témoignerait éloquentement de la mystification. Et puis, comme certains savants anthropologues l'ont dit ou laissé entendre en argument suprême: si leur médecine était si efficace, que ne les a-t-elle pas protégés des endémies qui dépeuplaient leur continent à l'arrivée de 'la médecine européenne'?

Ces questions, qui s'inscrivent en tracés d'une idéologie fondatrice d'un 'ordre' et d'un 'discours' médical, me ramènent à une question propédeutique: ce que le malade demande au guérisseur ou au médecin. Question banale? Et pourtant, en Occident comme dans les espaces africains où se donne 'la médecine européenne', le malade n'exige rien. Ou plus exactement, 'ce qu'il ne demande pas au médecin, c'est de guérir: parce que cela va sans dire, parce que la convention implicite de la consultation médicale, c'est que le consultant est malade et qu'il attend du médecin de ne l'être plus' [14, p. 145] et, avec la confiance d'un enfant soumis aux préceptes et au modèle de sa mère, il se livre à une technique dont on sait que, strictement, elle n'est constituée ni du total de ce qu'on peut dire de vrai sur la maladie, ni du total de ce qu'on peut dire de vrai sur la souffrance [33].

L'étude conduite récemment par Herzlich sur la représentation sociale de la santé et de la maladie [34] indiquait clairement que l'image que l'individu se fait de la santé et de la maladie "ne se confond pas avec la totalité de son savoir et ne reflète pas toujours l'objectivité de son comportement": il apparaît d'abord que "le langage de la maladie n'est pas un langage du corps"; face au médecin, une conception localisatrice l'investit et le malade, parlant de son corps, offre au praticien des signes de localisation pour désigner des organes; ensuite, l'on note que ce langage s'élabore grâce aux marques des "relations de l'individu à la société" et la maladie s'y oppose à la santé sous le mode des couples inactivité-activité, exclusion-inclusion qui concourent à la description de l'expérience de l'individu; du coup, "le travail de l'expérience, de l'information, cette organisation cognitive des phénomènes, est orientée par ces valeurs sociales organisatrices. Il aboutit à une norme de bien-portant et du malade—l'individu actif ou inactif dans la société—et parvient par là à maîtriser l'incertitude de l'organique informulable. Il détermine, sur un autre plan, des normes de conduite du bien-portant et du malade—refus de la maladie et persistance de l'activité sociale ou acceptation et lutte du malade par exemple—qui sont normes de conduite de l'individu dans la société. L'incertitude qu'il faut maîtriser est alors celle de l'identité sociale du sujet menacé par la maladie" [34, p. 176]. C'est donc dans le miroir de la valeur sociale que s'élaborent et se mesurent 'le corps' et 'la personne malade'. Aussi, lire la déstructuration

ou la faiblesse d'un corps, c'est, de ce fait, chercher son origine dans 'la société agressive'. Une telle représentation, estimait Herzlich, n'est peut-être pas sans analogie avec les conceptions primitives où la rupture de contact avec le groupe, le conflit ou l'exclusion de la collectivité suffisent, pense-t-on, en dehors de tout trouble physique, à entraîner la mort (et d'ailleurs l'entraînent effectivement dans de nombreux cas). De même que la collectivité, selon Mauss, suggère au primitif l'idée de mort, de même, sur le plan des représentations du moins, (la société occidentale) suggère à chacun de ses membres l'idée de maladie [34, p. 177].

Ces analogies ne comblent pas un écart majeur. Avant tout problème de la représentation de la santé et de la maladie, il y a deux croix essentielles: premièrement: la mission et la vocation de la médecine; deuxièmement: le rôle du malade dans le discours médical. Celles-là que fondent 'les mythologies du positivisme' ne se sont explicitées, par l'instauration d'une technique et d'un art positifs, que grâce à un retournement fantastique: les médecins, comme l'a montré Foucault [35], faisant de leur échec de guérir, le lieu du décollage de la science médicale. Et les prouesses scientifiques n'ont pu faire encore que l'homme dont la médecine s'occupe ne soit l'homme mortel qui se fie à elle. Et la scientificité de la médecine s'érige sur un échec dont Clavreul, après Foucault, nomme le signe: "avant (la) fixation d'une date de naissance de la médecine scientifique au demi-siècle précédent, c'est dans la référence à l'anatomie pathologique que la médecine voyait ce qu'il y avait de plus inattaquable, de plus scientifiquement démontrable de sa pratique. La preuve, la 'vérification', c'était l'autopsie: le cadavre avouait ce que les signes cliniques avaient permis de prévoir" [14, pp. 50-1]. —Et, en ce qui regarde la deuxième croix? Le rôle du malade est dans son attente: celle-ci s'intègre dans le discours du médecin et permet au praticien, en raison de la déontologie, des libertés extraordinaires. 'Je vous guérirai', 'cela va mieux, n'est-ce pas?', 'nous allons reprendre les examens et conduire de nouvelles investigations...; vous n'avez rien à craindre: c'est une question de temps... etc. Paroles souveraines, magistrales, ressortissant à un discours qui, par essence, 'se pense' hors des catégories de la vérité et du mensonge [25, p. 84]. Rien que les contraintes de la déontologie médicale qui autorisent ce genre d'exercices, pourraient expliquer la justesse des propositions que Clavreul tire d'une réflexion sur la relation médecin-malade: "il n'y a pas de relation médecin-malade. Il n'y a pas non plus de relation médecin-maladie. Il y a seulement une relation institution médicale-maladie. Le médecin ne parle et n'intervient qu'en tant qu'il est le représentant, le fonctionnaire du discours médical. Son personnage doit s'effacer devant l'objectivité scientifique dont il est garant. Quant au malade, ce n'est pas à lui qu'on s'adresse, mais à l'homme présumé normal qu'il était et qu'il doit redevenir, c'est-à-dire un homme qui raisonne juste, ce qui veut dire qu'il se soumet à la raison médicale" [14, p. 226].

Comparer 'l'ordre médical occidental' à la thérapie africaine? Comme si cela pouvait avoir un sens! L'assurance imperturbable du discours médical se situerait probablement face au dogmatisme impitoyable des devins-guérisseurs. Et ensuite? Les paradigmes de l'un ne sont pas et ne peuvent être ceux de l'autre, malgré

des analogies de surface que l'on pourrait noter. C'est qu'au départ des deux systèmes, deux codes, deux chiffres diamétralement opposés, s'infléchissent à des sévérités différentes: d'un côté, celles de la mythologie de la positivité; de l'autre, celle des mythes de la similitude.

C'est donc un 'autre' jardin, un tout autre cadre: la thérapie africaine est le lieu de projets qui, de beaucoup, dépassent le redressement d'un corps et le souci de l'individu. La maladie n'est certes pas perçue, ici non plus, dans la totalité du savoir de l'individu et ne correspond pas non plus à l'objectivité d'un comportement. Mais elle se pense dans la somme des extravagances imputables à un désordre socio-culturel ou naturel. Et l'agressivité latente que véhiculent la société et le monde ne serait qu'un régime naturel, reflet des tensions de l'univers; régime que, d'une part, entretient le sorcier et d'autre part, combat et compense le devin-guérisseur. Face au devin-guérisseur, la victime—le malade est ainsi et toujours le jouet des libertés excessives d'autrui et de la nature—tient, bien sûr, un langage localisateur lorsqu'il désigne son mal ou un organe défaillant, mais son langage s'achève dans les questions ou l'extase du devin-guérisseur. Le désir, en cette relation, se révèle, en sa nudité même, pour tendre vers la désignation des conflits et se révéler comme esprit de conciliation des similitudes. La mort demeure une calamité, de même que le mal, tout mal. Mais tout se passe comme s'ils étaient inscrits dans la nécessité de la vie.

L'exigence de la continuité de l'espèce a permis l'accumulation de connaissances complexes, particulièrement par les ressources des herboristes, mais celles-ci demeurent soumises aux propositions de la nature et n'ont pu encore, coupant avec le texte original, s'ériger en techniques pour la promotion inconditionnelle de la vie de l'individu. Et les maladies, expressions de l'esprit d'agression et d'antipathie, peuvent ainsi, à l'occasion, être des symboles d'élection par les dieux.

Le signe de la coupure incarnée par le cadavre dévoilant la surface d'une guérison possible n'a pas été thématiqué. Et la thérapie africaine demeure assujettie à l'ordre du monde et à ses signatures. Le règne de la convenance, de l'émulation, de l'analogie et de la sympathie est ce qui, avant toute autre chose, signifie la maîtrise de l'univers, autorise le travail rigoureux et la fatalité de la concorde entre hommes dans une communauté, entre l'homme et son environnement, entre la terre des hommes et l'univers des génies et des divinités. Mais à quel prix pour l'individu, qui, souvent—hélas!—, sacrifie son destin au nom de celui de l'éternité de l'espèce, en se soumettant parfois à l'art douteux de charlatans et empoisonneurs professionnels habillés en devins-guérisseurs!

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COMMENTS

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I was very pleased to be asked—an interloper with no experience of Africa—to open the discussion on these three papers. They stimulated lots of questions in my mind. I would like to begin by pointing out three kinds of general issue which I think are involved in different ways in the papers. I'm not sure that the stress I give them matches that in the papers but I hope the issues belong to this session. Let me say what they are first, then how they come up in the papers.

The first issue lies in the distinction between description and evaluation. Health and normality have average and ideal components. Health and normality are clearly valued states. How can an ideal or perfect state of health be specified? By what criteria? By whose criteria? Can it ever be achieved? We may try to specify what health is by our own standards, by independent standards, or by some particular people's standards. It might be a case of trying to describe the state of health we find according to certain indicators. The chosen indicators would serve descriptively. But we might aim at something rather different. We might try to judge whether the criteria that others have chosen to aim at or aspire to are worthwhile or good. Judging, evaluating what other people think of trying to achieve, whether it is good or bad, is different from merely describing it. To prescribe, to approve, or to recommend is not the same thing as trying to describe. A people's view of what health or normality should be does not necessarily match the view or standards of Western medicine. We shall need to be careful about the difference between describing and evaluating.

The second general issue is an obvious one, may be over-obvious. We can look at things like health from the viewpoint of the actor or from the viewpoint of the observer. Mudimbe reminds us eloquently that it can be hard to understand someone else's views on health accurately. Anthropologists are at risk of foisting their own assumptions on others. The task of describing correctly what others think, and understanding what they say accurately, is not simple. If the observer wishes to go beyond description so as to analyse someone else's actions, his reasons, logic, purposes or motives, the analysis is doomed if it should rest on misrepresentation or misunderstanding. Questions of coherence, rationality, what sort of system of ideas they have, depend first of all, and crucially, on the accuracy of an observer's grasp of the other people's views. So do judgements, for example, about whether what they say is true or false, good or bad.

The third general issue is the difference between state and process. We may be looking at how people define a state of health or illness, how we or they classify and sort. People choose criteria by which to sort kinds of things; that's an ancient point. Then we may also turn to look at how people understand what brings about change in some state of health or illness, issues of the processes involved. The point of this will come up later. I shan't labour it here but I think there is one thing to remember: you can view illness in someone's life from two points of view. You may want to classify his state, that is, to identify what kind or type of illness he has according to some system or other of classification. Or you may be trying to do something different—you may be trying to understand his illness as a patch of his personal biography, an event whose meaning, causes, and significance depend on a variety of factors, some quite individual and particular to his situation. You are not concerned in the same way to identify the event as one which fits a certain type or category in a classification.

So my three general kinds of issues are: description vs evaluation, actor's vs observer's views, state vs process. How do they come into the papers we have in front of us?

First, the theme of health. All the papers say the idea of health is complex. A wide array of factors may influence health in a community. John Janzen presents the !Ko Bushmen to show us an example of remarkable cultural adaptation to a hard desert environment. He also brings out some ways in which political and social changes have disrupted and upset the stability of that adaptation. We hear from Gwyn Prins too of similar findings in the work of recent historians of Africa. The perspective of adaptation brings in epidemiology and ecology.

Health viewed as adaptation to a particular situation and environment implies a biological perspective. The people survive more or less well there, mortality and numbers provide criteria. Heinz's description, which Janzen draws on, reveals many sorts of cultural adaptation rule and fact which have a bearing on !Ko health. The point I wish to make is that customs or rules for normal living are likely to be subject to more stringent selective and corrective pressures than what people think to do about manifest illness. If a society gave guidance in rules about normal life that was markedly dangerous to life, for instance, about drinking polluted water, eating a poisonous food, the people in that society would either have to change and correct their custom, or they would get ill and possibly die out. Rules for normal living must work reasonably well in adaptive biological terms because they concern all the people most of the time. But rules about manifest sickness affect only some people some of the time. There are lots of different ways of being sick. Sickness is occasional and inconstant. Rules about what to do for the sick are likely to be much less subject to corrective and selective pressures than rules meant for the normal life of everyone. Even though people do not necessarily phrase customs and rules for ordinary daily life in terms of specific effects on health, they must be at least reasonably well adapted to support and maintain life; or else the community will face disaster.

People do not adapt passively to a natural environment. They alter it, sometimes a great deal, for various reasons and purposes. The changes they make with short-term objectives in mind may not run to their long-term advantage. Gwyn Prins's example of lead in petrol shows how current interests can lead people to choose a goal which may have effects on their health which they don't foresee or desire, and the immediate interest, if strongly felt, may override longer term considerations of health even when they have been detected. It is not easy for anyone to circumscribe all that is relevant to health. And many customs of people may affect their health without the people necessarily considering them to be customs concerned with health.

In an evolutionary view, the biological criterion of growth in numbers of a population is one possible criterion of success, just as increasing mortality rates, diminishing numbers, are criteria of failure. There is obviously more to be said about biological criteria of health, normality and need.

I have raised the biological issue because the papers refer to the biological standpoint of scientific medicine. All the papers refer to a view that concentrates attention on biological attributes of the person in a restricted way and focusses on the individual. There are links to the question: Are health and illness just the two sides of one coin, of the same coin?

We tend to think of health in the singular. 'Healths' would sound odd. To some extent this is true of illness too. But diseases in medicine are thought of not in the singular but in the plural. You won't be likely to find a definition of 'disease' in a medical textbook, only the definitions of lots of different diseases.

Some criticize medicine for being preoccupied with illness, that is, diseases, and for neglecting health. It pays marked attention to the negative not the positive side of the coin. Illness is distressing and cries out for attention in a way that health does not. This is surely a common finding. People in most places work out explanations about illness and what to do for it with more conscious effort than they do for health. Health is often unremarked upon until it fails. A person does not think about his breathing, but if he is stifled, then he does so desperately. If normality, health, makes less claim on ordinary attention than illness, that seems to me a reason why we find a less explicit organisation of ideas regarding health, even though so much of custom and life affects it.

The criticism that medicine is concerned with what is negative, i.e. illness, is sometimes directed at the way a doctor will declare any man or woman in whom he can find no evidence of disease, healthy. Health in that view is equated with the absence of identifiable disease. The reproach to medicine then is that it fails to lay stress on health as a positive state to be promoted, something better than mere absence of disease. Many other views of health see it as an ideal state, something phrased in terms of physical, mental and social well-being. The doctor who says that all he can do is to say whether or not he can find any indicators of disease aims too low. But does he? Can the doctor specify some ideal balance or harmony or pinnacle of physical, psychological and social well-being? Should it be his job to do so? Ideals must vary according to the goals and values involved. If perfect adaptation is at issue, the doctor may quite legitimately ask "adaptation for what?" Would the ideal health requirements for an acrobat be the same as those for a lorry driver? Would the state of ideal health for a !Koi Bushman be the same as that for a city dweller in Kinshasa or Cambridge? And remember to keep mental, social and physical well-being all in mind. How friendly, tall, dark, beautiful, strong, and clever must this man or woman be to be called healthy? How much food, money, authority, how many wives, does that man need for his well-being and the satisfaction of his desires? The point is that positive health would involve values, ethics, ideals, as well as needs, desires and wants. Whether one can derive ethics, morals and values from man's natural needs is an ancient question in philosophy. I'm not competent to discuss it. But it does seem to me that the doctor who limits himself to saying that he can identify some indicators of diseases and that, if he cannot find any, he will suppose the person to be healthy, shows a realistic sense of his limitations. If health in the positive sense is made to involve political, religious or moral questions, social questions essentially, should it be the job of the doctor, the individual for himself, the society, or God, to state what health should be? The cautious doctor will say that he can tell if someone shows signs of disease or not. The question of health or illness can be answered in these terms about particular people. A society cannot be found sick or healthy except by counting the kinds of indicators of identifiable disease to be found in the individuals that make up its population. These indicators of disease, the statistics of survival rate, morbidity, and mortality, are descriptive and factual. They can support statements that a society is relatively sick or healthy. Otherwise, we move into metaphor.

But suppose we look at it not as observers but from the actor's point of view. Then the situation changes. The actors' specifications of what is required for a state of health may range far more widely than those of medicine. The papers tell us many ways in which particular people hold different views. Each individual and each society would probably draw up the list of what is required for ideal, positive health in slightly different terms of need and priority. There are many openings for discrepancy between the medical criteria of absence of disease and other people's standards of health in the positive sense. They lead to differences of opinion about how successful an effort at treatment has been. The first task it seems to me is to try to understand and describe the standards and goals that the people concerned have chosen. That is a descriptive task. Of course, practical and ethical questions may loom up behind this first task, especially for governments or people interested in the medical services, as soon as the information is known and the issue switched to one of evaluating these goals or standards. Keith Thomas's study of *Religion and the Decline of Magic* begins with a brief picture of the conditions and quality of life in sixteenth and seventeenth century England: the experience of ordinary people, and particularly the poor, was one of intermittent illness, the early deaths of many of their children, and so on. They had, as he points out, no other standards by which to expect less misery, or to see their lot as specially pitiable. They had to accept what they experienced. They had no alternative standards to judge it by such as we have now. Something like that situation must still prevail in many parts of the world. It is the situation of

someone who has been anaemic nearly all her life. She accepts her lassitude, weakness as something that is normal. Only after treatment of her anaemia can she realize that she didn't have to. So I think there may be questions of judgement on other people's standards of health which would occur to those who have medical knowledge and responsibility towards those people and their health.

Again when Prins and Mudimbe point to the difference between perceptions of collective and individual goals in health, it is one thing to note it descriptively, another to note it prescriptively. There are some important ethical questions to be raised if one sets the well-being of the society above that of the individual. For instance, who is to judge what to do about the sick who are criminal, or disabled, or old, and so on? The doctor or someone else? Ethical problems of choice between the goals of individual care and public health may also rise up in different terms of cost-effectiveness and limited resources.

The main point is the need to find out what are the criteria by which people judge health because their views will affect their responses to illness, the search for treatment, their judgements of efficacy. Mudimbe, Janzen and Prins bring these issues forward in relation to particular characterizations of health. There is the same need to have a clear understanding of views about the processes which affect states of illness or health. Mudimbe characterises some of the larger themes of causal and other influences that contribute to an African understanding of man in relation to nature—a *prose de la vie* which would seem closer to *poésie* than prose to me. It would be pure presumption on the part of an outsider to examine the analytic questions of the logic, coherence, consistency, or rationality of their ideas if the outsider could not first understand or discover accurately what their views are. And if anthropologists comment on scientific medicine, there is surely the same obligation to grasp thinking in scientific medicine. It won't get us far to caricature medicine and create a straw-man version made of reductionist specific single cause theories so that we can criticize it.

Only after completing the first task of accurate understanding can the observer go on to try to explain or interpret why or how someone else or other people have come to hold those views, what forces may have moulded them or maintained them. He may try to evaluate them, or try to decide in what terms they are to be judged true or false; admirable or deplorable; safe or dangerous.

Gwyn Prins has many questions cooking in his pots—the larger one with porridge, the smaller with relish. Two particularly are on the boil. First, the question of the degree of systematization to be found in thought and action when we consider illness and care. Janzen asks us to look again at the many levels of Zande explanations for illness. We are reminded of the flux of new and old ideas in changing Africa. Why, or how much, should we expect such plurality of level and source of idea to be organized into a coherent framework or a system? Prins' second question concerns the relationship between the logic of causality and the quest for therapy, and also the relationship between study of the one and study of the other.

As to system in ideas and explanations, the first issue would seem to me an analytic question about content and connection in people's thought. An answer depends on correct grasp of their views. It is an internal analytic question of the logic, coherence and consistency of their ideas: whether their assertions follow from certain assumptions or premises of the sort, say, that Mudimbe outlined; whether they have one or many levels of explanation; how these are related to each other within one system or perhaps coexist in a kaleidoscope of fragmented views and explanatory themes. No simple single answer can be given. It must depend on knowing what they refer to, how their different areas of knowledge are distributed, and perhaps controlled as esoteric knowledge or as public knowledge for all to know, and in turn how particular areas of knowledge may be related to other cultural goals, values, or priorities. The frame within which some illness is managed may well be related to issues of social conflict, social sanction, wickedness and sin.

The analytic question of coherence in ideas, and their interrelationships, is internal to the culture and separable from questions we might wish to pose about whether what they say corresponds to reality, is true or false. Sometimes this external question (about how a view may stand up empirically to experience when the world is as it is whether or not someone knows about a particular thing in it) is relevant and interesting for discussion of what might lead to changes in people's ideas. The Fore people of New Guinea, for example, suffered from a highly distinctive and inevitably fatal disease which they called *kuru*. They maintained it was caused by sorcery and tried all sorts of ways to treat it and to control the sorcery. They kept failing. The disease was discovered by medical scientists to be caused by an atypical virus which spread in a certain way. No action against sorcerers or against sorcery bundles could have stopped it. The nature of the facts about which theories are constructed may have implications for the fate of the theories. The content of a theory or a classification of illness may be matched against nature and experience. If, for example, a theory about one illness links it to a particular causal situation or a particular outcome rigidly but falsely, it is more likely to be exposed as false than a theory which is flexible or linked to a wide variety of possible causal situations or possible outcomes. Thus theories about illness, their coherence and consistency, what leads to change in these theories, may also be linked to questions of the ways in which they may allow for doubt, create uncertainty or certainty, when they have to face the realities of sickness and its outcomes, in effect, the medical facts.

A rather different aspect of consistency is entailed when we ask how does theory relate to practice. Here there is first an empirical question: do they in fact do what they say they should do according to the theories about illness which they have explained to us. If their theory seems to demand a particular line of action in response to a particular kind of illness but we find discrepancy between what they say and what they do, then the job is to try to find out why—what reasons or motives lie behind their decisions or choice of what to do? Constraints of time or money? The observer may find that social considerations of a wide variety of kinds, which are external to the theories they have about illness as such, have led to their choice of action. My basic point, however, is that I do not see how study of the content and logic of ideas about illness can be kept separate from

study of the quest for therapy without wrecking the attempt to understand other people's responses to illness. The facts of sickness may rebound upon theories about it and lead to change in them; but that depends partly on how the theories are phrased. We cannot understand what people do when they are sick without knowing what they think about it.

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III. STUDIES IN MEDICAL SYSTEMS

This section presents studies describing and analyzing perceptions of affliction, therapies, and practitioners roles in terms of a discrete domain often called the 'medical'. In anthropological and other social science literature it has become commonplace to speak of it as the 'medical system'. Although we shall use this term here, in Section IV criticism is voiced of the assumption that 'the medical' is an autonomous domain with tightly-linked concepts, practices, and social roles. Authors of Section IV show how the medical domain is often modified by economic, political, ideological and technological forces. Therefore we have taken the notion of a "medical culture" to characterize the entire set of concepts, practices and roles relating to illness and healing, and that of 'medical system' to characterize a tighter, more autonomously-organised medical field.

Authors of the present section's papers assume the stance of a discrete, analytically and empirically identifiable medical system. They contribute to the growing body of literature [1-5] on 'comparative medical systems' studies since their work ranges from Morocco to Zimbabwe, from West to East Africa, from relatively homogeneous contexts such as Cokwe society to extreme pluralism on the island of Mauritius. These papers fall well within the scholarly tradition on comparative medical systems which presents medical systems with a range of characteristics and properties commonly investigated in the social and biological sciences. Medical systems in some works are defined as conscious, institutionalized, health-related interventions that are couched within a broader adaptive or ecological setting [6-8], a perspective taken in the first set of papers of the Medicine and Society project [9]. Other parts of the literature on comparative medical systems emphasize the distinction between explanatory models and behavioral norms (the cultural) and role systems of practitioners and institutions of medical knowledge (the social) [10]. Medical systems have also been explained in terms of the history of cultural or civilizational traditions [1, 11], with a strong emphasis on continuities and discontinuities in medicine and how they may be explained [9, p. 24]. The most wide-ranging work of this latter kind has been carried out in the Asian setting in what Leslie calls the 'civilizational' perspective, suggesting that in the study of African medical systems in which there has been an over-riding concern with local studies, there is precisely such a need to develop the regional, larger-scale, and historically long-term perspective. The papers of this present section contribute toward the development of a stronger base of descriptive and theoretical work from which comparative writing will be more easily possible in the future. Section VI on 'Issues and Findings' will return to the question of the civilizational perspective in comparative medical studies in Africa.

Papers of Part (a)—Greenwood, Yoder, Sussman, Ranger—describe holistically structural features of a presumed cohesive system of concepts, practices and policies in the medical field. Most of the papers couch this quality in a historical framework, with some suggestions of the long-term perspective, as in Greenwood's account of Islamic medicine influences, or the merger or confrontation of such civilizational traditions, as in Sussman's account of Mauritius or the fairly recent imposition of one medical tradition on another, as in Ranger's account of missionary medicine in Zimbabwe. Yoder's paper, somewhat differently, shows the relatively stable continuity of a conceptual system, that of the Cokwe, even though elements are more varying. In each paper the conceptual core of classificatory and etiologic ideas or theories is identified which operates to bring disparate illness experiences into clearer focus, leading to treatment choices among different types of practitioners and alternative therapies in a pluralistic system.

The papers of Part (b)—Zempleni, Bibeau, Roberts—focus more pointedly on the conceptual apparatus of a society's medical system as it brings either causal inferences to particular symptoms and signs, or more broadly, meaningfulness to the experience of suffering. The papers of this section represent important theoretical perspectives such as the French-Dakar school, with its emphasis on the intricate relationship seen to exist between illness cause, the agent which carries it, and the origin of that illness; semantic analysis of multiple—as Bibeau speaks of it, 'circular'—areas of meaning in classificatory and causal logic; and symbolic analysis in the Turner tradition which interprets affliction and misfortune in a manner which is sensitive to its context. While there may be a valid objection to the implicit portrayal of these conceptual systems as closed or autonomous, the authors show how they are in fact extremely resilient, well-integrated, self-sufficient systems of thought, capable of accomodating considerable change in types of new illnesses, and in referral to practitioners appropriate for them.

The papers of Part (c)—Staiano, Kimani, and Mahaniah—differ from the foregoing sets in their relatively greater emphasis on the social setting of decision-making by medical clients and on the perceived nature of available treatment modalities. Although as above concepts of disease cause and classification are delineated, the emphasis is here on the diagnostic or divinatory procedure and the manner in which therapies are expected to resolve problems. The 'medical system' is here framed more fully in the social process of the quest for therapy, in the social process of evaluating evidence, and in alternative institutionalized therapeutic specialists available to the sufferer.

In all of the papers of this section the analytic notion of the medical system is taken seriously and is seen to identify the structure of concepts, logical inferences, symbolic, semantic, semiotic and etiologic codes, as well as social processes and institutions found in the articulation of suffering and in coming to terms with it or eliminating it entirely.

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III(a) PERCEIVING SYSTEMS

COLD OR SPIRITS? CHOICE AND AMBIGUITY IN MOROCCO'S PLURALISTIC MEDICAL SYSTEM

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Abstract—The two medical traditions which make up Arabic medical science remain as separate but complementary elements of Morocco's present pluralistic system. Prophetic medicine is concerned with spirit aetiologies, and Galenic humoral medicine with environmental factors. At their interface, an ambiguous group of illnesses refers to either system for their explanation and treatment, and analysis of their ambiguity demonstrates a profound syncretism between the systems around the concept of illness from contamination by cold or spirits. The illnesses are mostly chronic organic impairment of the senses, locomotion and fertility for which there is little effective treatment, and the Moroccan response to them, by drawing explicit symbols from two areas of shared experience—environmental cold as a pathogenic agent of the ecological domain, and spirit encounter as a feature of the neurotic domain—into the implicit understanding of their symptoms and signs, relates the private experience of organic illness to shared social categories in a way that may have value from the biomedical viewpoint.

INTRODUCTION

When two distinct medical systems are involved in a society's response to illness, they are usually concerned with different theories of causation and types of illness. This is the case in Morocco, where the Prophetic and Galenic humoral systems that came together in the historical development of Arabic medicine remain as separate but integrated elements of the present medical system. The basis of their syncretism can be found in the area where they overlap, and illness classification, for example, shows an ambiguous category of illnesses that refers to either system for its explanation and treatment. The group will be examined to see what features give it a dual position and to place it in the general framework of the Moroccan view of health and response to illness.

This paper looks at three aspects of this framework: illness in relation to psychological and social factors—the cultural aspect, and the province of the Prophetic system; illness in relation to the environment—the ecological aspect, and the province of the humoral system; and illness as physical or organic abnormality—the biological aspect, and the central concern of this paper. The ambiguous group is made up of chronic and largely incurable organic illnesses—stroke, paralysis, neuralgias, loss of sight, hearing or speech, and barrenness—and their explanation and treatment exemplify the society's response to organic illness for which there is no medically effective treatment. It is argued that, through the two systems, the outer and inner worlds may be harmonized in the experience of these illnesses by relating both their ecological and cultural aspects to the symptoms and signs. The value of this response, from the biomedical viewpoint, lies in the broad acknowledgement of the illnesses, the restoration of ontological wholeness, and the creation of optimal conditions for natural recovery.

The analysis is based on a description of the seman-

tic networks around the illness terms employed in the two systems, in order to trace, in Kleinman's words, "the symbolic pathways of words, feelings, values and expectations, beliefs and the like, which connect cultural events with affective and physiological processes" [1]. This approach has been described in its application to another Islamic society, Iran, by Good [2], and its conclusions complement those of Crapanzano [3] and Dwyer [4], for example, in their Moroccan studies.

The fieldwork material is drawn from a year's medical practice in Chaouen, northern Morocco, 6 months visiting healers in several parts of the country, and a year's study of a small rural community, Ain Leuh, in the Middle Atlas mountains of central Morocco [5]. It is not, therefore, based solely on the ethnography of one area.

THE MOROCCAN MEDICAL SYSTEM

Arabic or Muslim medicine (*dua musselman*) is made up of two medical traditions that coexisted during the early Islamic period; one indigenous and magico-religious, the other alien, scientific and secular [6]. This pluralistic system reflects a partial syncretism between Prophetic medicine, established soon after the Prophet's death, and the Galenic humoral medicine of Greece, which was introduced by Arab scholars and elaborated as Yunani clinical science [7]. The system's present attenuated form reflects the decline of Arabic science since the 12th century, but despite recent European influences it remains the basis of Moroccan beliefs and practice.

PROPHETIC MEDICINE

The Bedouin medicine of Muhammad's time included treatment by diet, drugs and the manipulation of impurity by bleeding, scarification and branding.

These features became crystallized and legitimated by the Qur'an and Hadith, which affirmed such elements of the Bedouin world view as spirits (*jnun*, sing. *jinn*), sorcery and the (evil) Eye as agents of illness and misfortune, and the use of magic to counteract them.

Two important additions—the healing power possessed by the Prophet and inheritable by his descendants, and the power of the words, letters and numerology of the Qur'an to prevent and treat illness—are perpetuated by the two types of Prophetic medical practitioner: the holy man (called in Morocco *cherif*, pl. *chorfa*), who traces his descent from Muhammad and may inherit practical techniques; and the Qur'an expert or scribe (*fqih*, pl. *fuqaha*). Both base their treatment on *baraka* (holiness, blessing), at the same time a social and moral attribute and a mystical and physical force [8]. *Baraka* lies at the positive pole of the moral and medical world view, opposite the notion of *bas* (harm, misfortune) to which the spirits and spirit-mediated sorcery and Eye belong.

Prophetic medicine is thus characterized by the concepts of illness from spiritual invasion and interpersonal harm, and healing by a power derived from both the Messenger and the Message of God.

The cherif

The title *cherif* in its widest use describes one of the thousands of men and women claiming descent from the Prophet, who do not necessarily have any special endowment or status in society. It also denotes those *chorfa* who possess *baraka* and are honoured and respected on account of membership of one of the holy or powerful cherifian families, a life of piety and religious devotion, or the ability to treat illness [9, 10]. Those that officiate at the shrine of their ancestral saint, or are members of religious brotherhoods founded by saints, are visited by the sick to obtain healing *baraka* in the form of their saliva or shared food, especially bread, or by attending healing ceremonies and spirit exorcisms. Other *chorfa*, usually practising alone, have inherited *baraka* specific to one or two illnesses, or possess techniques of branding, scarification, and bleeding at prescribed points of the body, according to the organs involved in the illness. While the historical rationale for these manipulations is presumably the removal of disease-causing spirits, *chorfa* more commonly explain them as simply their inherited *baraka*, or as means of expelling cold. This merging of spirit invasion and humoral cold in the concept of illness from impurity will be examined later. There are thus three modes of treatment used by the *chorfa*: general healing *baraka* against any illness; technical skills for specific illness; and the exorcism of spirits.

The fqih

The word *fqih* (scribe, learned person) has the general meaning of someone who has studied the Qur'an and Hadith and who works as a schoolteacher, clerk or official of the Islamic jural system, and also a particular meaning of a practitioner of Qur'anic magic (*hekma*), defined as the attempt to influence events and relationships by supernatural means. In his ritual role the *fqih* propitiates spirits at births, weddings, funerals and sacred feasts. He prepares talismans (*hajib*) against misfortune for people, buildings and

enterprises, counteracts the Eye and sorcery, exorcizes spirits and can treat any illness; but his special abilities concern supernaturally caused illness and spirit exorcism [11].

The medicine of the *cherif* and the *fqih*, then, is broadly of the Prophetic tradition, although both commonly practise herbal and humoral medicine as well.

The attar

Herbal remedies with some presumed pharmacological action are widely used on an empirical basis, being either prepared in the home or bought from a herbalist (*attar*), who may give consultations and prescribe treatment. They are derived from Arabic medicine and local folk tradition, and include medicines imported from the Middle East and India as well as locally grown plants. Herbalists also prepare medicines used in the humoral and Prophetic systems.

Choice of healer

The full range of healers in Ain Leuh is shown in Fig. 1, of which the most important are the *cherif*, *fqih* and herbalist.

Spirits

The world view which supports Prophetic medicine is centred around the spirits, who in Moroccan cosmology are a poorly differentiated race of supernatural beings living, usually invisibly, alongside humans and having a similar social structure. They are characteristically capricious, vengeful, libidinous, obscene, demanding and violent, and are generally respected and feared. A large body of custom relates to their avoidance and propitiation, and to places and circumstances where they are likely to be encountered.

But Moroccans have to live with the problem of sharing their environment with these beings, who, if offended, retaliate by causing illness and madness. The severity of their attack determines in retrospect the type of offence. Insulting or neglecting to propitiate a spirit causes mild or transient symptoms. Treading on or injuring a spirit, especially a malevolent one, leads it to strike back; the victim is said to be slapped (*matrush*), or struck (*madrub*), with symptoms compatible with a blow—localized pain or loss of function which is prolonged if the spirit enters the body at the point of attack. Sometimes the spirit takes over the whole person, who becomes inhabited (*maskun*), and suffers from depression, madness, epilepsy or spirit possession.

Thus as conceptual elements in Moroccan cosmology, the spirits provide a medical and moral logic for the causation and treatment of illness. But Moroccans also consider them as phenomenal beings that are seen in dreams, delirium, trance, and by children and the mentally ill, and it is these images that feed common imagination in a society without shamanism or priesthood. Many anomalous phenomena are taken as spirit sightings, particularly animals or people of unusual appearance or behaviour in markets, on journeys or at night. Sometimes men claim sexual encounters with female spirits, or even enduring relationships with them. Such encounters are often blamed for subsequent illness or misfortune.

CHOICE OF HEALER	THERAPEUTIC PRINCIPLE							
	HERBAL	HUMORAL	PROPHETIC					WESTERN MEDICINE
			Qur'ānic Magic	Counter-sorcery	Simple Baraka	Cutting, Branding	Exorcism	
Self, family, neighbour	+	+						
Barber/cupper		+						
*Bonesetter/surgeon	+	+						
Midwife	+	+						
*Toothpuller	+	+						
*Herbalist	+	+		+				
*Market medicine seller	+	+		+				+
*Fqih			+	+			+	
*Cherif/brander					+	+	+	
Religious brotherhood					+		+	
Visit to saint's shrine					+			
Womens's cults				+			+	
*Doctor, nurse								+
Missionary								+

*May be full-time professional healer.

Fig. 1. Choice of healer in Ain Leuh.

The circumstances of these spirit encounters confirm the moral element in the aetiology of spirit illness. Not only must one avoid accidentally offending spirits in everyday life, but there is danger in thoughts of adultery, and going away from home or out at night without good reason, that parallels the danger to society from such opportunities for mischief. Fear of spirit encounter makes people reluctant to move out of their home and kin environment, a reluctance that is mirrored in the attitude that strangers may be enemies unless made safe by social contact and hospitality. It is not surprising that illnesses caused by spirits are often those that specifically incapacitate the expected social role of the victim.

The Eye and sorcery

The two other supernatural causes of illness that concern the Prophetic medical system must be mentioned, although they are not as common as spirits. The Eye, or Eye of People (*el-âin ben adam*) is a glance of envy or ridicule that is retrospectively diagnosed as a cause of illness or misfortune. Most susceptible are new, young, growing and successful things, and unexpected illness in children is often attributed to it. The responsibility for it lies fully with the victim, and fear of it is an effective control against greed, pride and ostentation.

Sorcery (*es-shor*) is practised alone or with the help of a professional *fqih*/sorcerer. It is used to harm enemies or their property and to influence affections between men and women. Sorcery substances or Qur'ān-based formulae, often reversed, are placed near the intended victim, or in food, and as some of these substances contain poisonous alkaloids and are

administered over long periods, food sorcery is often effective. The practice, and more important the accusation, of sorcery is a common element in the conflicts inherent in Moroccan family structure, particularly in sexual relationships and the struggle between a young wife and her husband's mother for economic security [4, 12].

HUMORAL MEDICINE

While the Prophetic system derives its authority from Islam, is illness-orientated, and relates illness and misfortune to psychosocial factors, the humoral medical system is its opposite—a secular, empirical science that is health-orientated and primarily concerned with the inner experience of the body in relation to the environment.

What remains of the full Galenic physiology of the four humours modified by the four qualities, is practically confined to the opposition of heat and cold. There are hot and cold foods and environmental factors, whose imbalance in the body produces hot or cold illnesses that are treated by foods of the opposite quality. There is a marked asymmetry in this opposition: most foods are hot and most illnesses cold, and the position of equilibrium, or health, imparts a negative value to cold foods and climate, and vice versa. Humoral medicines used to treat cold illness are concentrated doses of the hottest food substances. The qualities of wetness and dryness only concern foods affecting the consistency of the stool, and while the four humours are known by some experts, in normal practice only excess blood as a feature of hot illness, and excess phlegm as a feature of cold illness are conceptualized.

The starting point for analysis of the humoral system is the classification of food according to its hot and cold qualities in order to trace, through networks of meaning around these terms, their place in the classification of illness, and their relationship with the moral and mystical world view of the Prophetic tradition.

An immediate problem arises: while all Moroccans agree on what are hot and cold illnesses, and each person is able to name at least a hundred food items as hot or cold, there is a marked disagreement (up to 30%) between individuals in their food classification. Similar differences led Taylor to believe that there was no empirical validity underlying the Indian classification of hot and cold foods [13]. But in the Moroccan case, an analysis of why each item is considered hot or cold does reveal a logically consistent principle in each individual, which is idiosyncratic to the extent that it is based on personal knowledge of foods.

In a small survey, twelve people were asked to classify 110 foods into hot and cold categories, and give their reasons for each food and ideas about foods and illness categories. Because of the variability, there is limited value in summarising the findings, but Fig. 2 lists 65 foods that were usually considered hot and 10 usually cold.

Often no reason was given for a food's quality, and many were learned in childhood. When reasons were given they related to the effect on the body in health and in hot and cold illness, taste, the growing and eating season, and the nutritional value. Figure 3 shows the universally agreed features of hot and cold foods, despite disagreement in their classification.

Hot and cold foods in health

Hot foods make the body feel warm, relaxed and full of energy. The blood rises to the head, giving it a feeling of throbbing fullness; the skin is flushed, and cramps and joint stiffness are relieved. Cold foods make the body feel cold, stiff and aching; the skin is pale and cold. Often the effects are only felt when a large quantity of the food has been eaten, or the subject is already in imbalance or ill. But foods that do not taste or feel hot or cold may still be classified because their 'origin' or 'essence' (*âsil*) is hot or cold. This essential quality is usually learned from the mother.

It is now possible to see the underlying logic in the food classification. For example, ginger, cloves, and nutmeg produce the physiological effects of a warm feeling in the stomach and skin and a general relaxation and fullness in the head. They are perceived as 'hot', and are associated with the bodily warmth of summer, a feeling of well-being, and the symptomatic relief of colds, catarrh and stomach cramps. By association, other piquant or strong-flavoured spices are deemed to have the same effects, and are also classified as hot, 'in essence'. Vinegar, citrus fruit, turnip and coffee, on the other hand, produce a cold, unpleasant feeling in the stomach and sometimes cramps and diarrhoea. They are perceived as 'cold', and are associated with bodily cold, winter and the feeling of malaise in common self-limiting illnesses. Any food that is sour or indigestible then comes to be called cold.

Of the five recognized tastes, piquant, bitter, sour, sweet and salt, piquant and bitter are considered hot,

HOT			
Hot in all cases		Hot or neutral	Cold in one case
Very Hot	Hot		
Ambergris	Cumin	Absinthe	Black pepper
Garlic	Ginger	Potato	Cinnamon
Honey	Harmal	Artichoke	Tumeric
Celery	Rosemary	Chickpea	Tea
Nutmeg	Pennyroyal	Rice	Mint
Cloves	Nuts	Wheat	Lemon Mint
Ras el-hanut	Butter	Oats	Salt
(hot spices)	Cheese	Sugar	Yeast
Egg yolk	Goat milk	Olive oil	Bread
Sheep milk	Yoghurt	Fig	Barley
Camel milk	Chicken	Date	Couscous
Penicillin	Pigeon	Quince	Wine
	Hedgehog	Sheep	Pomegranate
	Olives	Horse	Radish
	Cabbage	Turkey	Leek
	Spinach	Pheasant	Camel
	Broadbean	Cow milk	
	Mushroom		
COLD			
Hot in one case	Cold or neutral		Cold in all cases
Coffee	Turnip	Vinegar	
Cucumber	Vegetable oil		
Orange			
Mandarin			
Grapefruit			
Cherry			
Watermelon			

Fig. 2. List of foods generally considered hot or cold by 12 subjects.

	HOT FOODS	COLD FOODS
Taste	Piquant or bitter	Sour
Effect on body		
General	Warm, relaxed; restless in summer	Cold, shocked, weak, depressed, sleepless
Blood	Thinner, faster, rises to head	Thicker, slower
Blood vessels	Open	Nil
Skin	Hot, flushed	Cold, pale, blue
Head	Throbs, full, aches	Nil
Stomach	Feels warm	Feels cold, cramps
Intestines	Constipate or nil	Cramps, loosen, diarrhoea
Menstruation	Relieve cramps	Cause cramps
Joints	Relieve stiffness	Stiff and aching
Effect in hot illness	Exacerbates	Ameliorates
Effect in cold illness	Ameliorates	Exacerbates
General value	Good	Poor
Nutritive value	Strong, nutritious, 'vitamins'	Poor
Value for babies	Bad	Good
Value for old people	Good	Bad
Growing season (where applicable)	Summer	Winter
Eating season	Best in winter	Best in summer

Fig. 3. Features of hot and cold foods.

sour is cold, and sweet and salt neither. The word for piquant, *harr*, comes from the root meaning "to be freed from slavery" and in classical Arabic it is often punned with another identical root meaning "to be hot or ardent", although this meaning is little used in Morocco. Another less likely associative pun may occur between *xamad*, meaning 'sour', and *hamid*, meaning "to be cool, perish, barren (ground)".

Growing season is another criterion. Foods that can grow in winter are cold. Turnips and citrus fruit are harvested in the winter months and are cold, whereas olives, figs and dates are harvested in summer and are hot.

With a positive value attached to heat and summer, the season of plenty, and a negative value to cold and winter, the season of hardship, ideas of nutritive value enter the classification. Foods that one can live on, such as meat, bread and dairy produce are hot, while those that do not satisfy hunger are cold. This nutritional logic is extended in such ideas as the separation of milk into butter, which is hot, and butter-milk, its watery remainder, which is cold. Egg-yolk is hot and egg-white cold, because "the yolk becomes the chicken and the white the feathers".

Each person uses several of these associations to derive his food classification, and there are many different pathways around the network of meanings. Most of them are held in common but some are idio-

syncratic. One man, for example, noted that goat meat tasted sour and caused indigestion and joint stiffness, the conventional effects of cold food. As he also observed that goats could not tolerate being outside in the winter but (Friesian) cattle could, he reasoned that beef was hot.

This complex food classification, with its related illness classification, is possible because of the marked polysemy of the words 'hot' and 'cold', that range from the sharpness and bluntness of a knife or human wits to ideas about age, sexual vigour and fertility, that will be considered later. It is based on the cultural link of physical heat and cold to two subtle but perceptible physiological states, and is extended to include most foods by a logic based on similarity or metonymy. In a way the two inner states—one of throbbing warmth, relaxation, fullness and high energy, the other of cramping cold, stiffness and low energy—are reminiscent of states of parasympathetic and sympathetic domination in the autonomic nervous system of Western physiology, although they do not nicely fit with them. It is known, however, that the autonomic system is not a simple dyadic system, and that many states of dynamic combination exist. It is possible that the Moroccan humoral system expresses an awareness of a distinct autonomic polarity that is as culturally appropriate as the ergotropic/trophotropic polarity is to Europeans. The common

comparison of the effects of excess cold food to the feelings of fright suggests a possible cultural connection between autonomic awareness and emotional states [14, 15]. Other biomedical correlations with the humoral system might be mooted; the sourness and acidity of cold foods suggest an effect on the acid-base balance, and the idea of energy and growth could be related to the anabolic and catabolic qualities of foods.

Hot and cold illness

Exaggerations of the feelings associated with excess hot and cold foods become the symptoms of hot and cold illnesses, whose generally agreed features are summarized in Fig. 4.

The heat or cold is thought to cause illness where it strikes, and also to travel in the body—heat expanding the blood vessels and rising to the head; cold penetrating directly towards the bones and internal organs—to produce the commonest presenting complaints: "the blood has risen to my head", or "I ache in every joint". The excessive blood in hot illness and mucous discharges in cold illness suggest that the sanguine and phlegmatic humours of Galenic medicine have become merged with the hot and cold qualities.

The humoral illnesses most accessible to Western understanding are sun- and heatstroke, and colds or 'chills' of the respiratory system, stomach, intestines and bladder. Moroccans share the popular Western

	HOT ILLNESS	COLD ILLNESS
General state	High energy	Low energy
Usual site	Head, upper half of body (except lungs)	Back, lower half of body, lungs
Position	Superficial	Deep
Type of pain	Throbbing	Constant or spasmodic
Blood	Full, sometimes 'dirty'	Weak, bad, sometimes 'poisoned'
Skin	Hot, flushed	Cold, pale, blue
Head	Full, throbbing, aching	Nil
Joints	Nil	Painful, stiff or swollen
Fever (where present)	With rigors	Without rigors
Illness types	Eye illness Head fullness, throbbing headache Constipation Childhood febrile illness Skin eruptions Heatstroke, sunstroke	Ear, nose throat, chest, urinary - with secretions One-sided headache (migraine) Stomach, indigestion, vomiting, intestinal cramps, diarrhoea Menstrual pain Joints, muscles Barreness Paralysis, loss of senses
Cause	Sun, heat, hot wind Excess hot food in summer	Cold wind or water Excess cold food in winter
Predisposing factors	Exertion	Going outside Getting wet Drinking cold water Discarding clothes before summer
Most at risk	Babies	Old, wounded or tired people
Seasonal risk	Summer	Winter
Mechanism	Heat enters blood, which rises to head	Cold enters blood and travels towards bones
Treatment	Cooling body Cupping, leeches at neck Cold substances	Warming body, branding Phlebotomy, scarification Hot substances
Incidence	Uncommon	Common

Fig. 4. Features of hot and cold illnesses.

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idea that going out into cold air, cold draughts, and getting wet are a cause of colds and chills, for which they use the same terminology (*berd, bruda*) [28]. Craddock's Short Textbook of General Practice has this to say on the subject of colds:

Chilling has not been shown experimentally to cause colds. During the incubation period an individual often feels the cold excessively and thinks that getting chilled has caused his infection. Drying of the respiratory mucosa predisposes to infection, and Hope-Simpson has shown that the difference in humidity between indoors and outdoors during the winter is one of the reasons for increased prevalence. Another reason has been shown to be an alteration in temperature [16].

But Moroccans extend this folk wisdom to a fear of cold that does not appear to be warranted by the threat of these common ailments. Their obsession with cold draughts when coming out of the baths (when they are ritually pure and have entered the liminal state in the cycle: ablution → prayer → return to normal life, and are therefore mystically vulnerable); when going outside at night (mystically dangerous); and their tendency to wear full winter clothes whatever the weather until May 1st, the start of summer, suggests that when physical cold enters the body it can become a contamination (as evidenced by its spread in the body and its removal as 'poisoned' blood from veins), which may have an implicit mystical component.

While cold moves downwards and inwards and lingers there, heat moves upwards and outwards and is soon dissipated as skin eruptions and head and eye disorders. Although heat sometimes makes the blood 'dirty', it is not so much a contamination as an extra fullness and energy of the blood itself. Young children are very hot and prone to hot illness; old, tired or wounded people have little heat and are prone to cold illness. Heat is thus a symbol for the life-force, only dangerous in excess, that heals cold, the deficiency of life-force in the old and contaminated. It is not difficult to imagine how the symbolic opposition of hot:cold becomes transformed into that of *baraka*: spirit invasion between the domains of the natural and supernatural environments.

But Moroccans usually see the humoral system as a theory of diet, orientated towards health rather than illness; as a normative and preventive system rather than a theory of abnormality like the Prophetic system. Women (and men) always bear it in mind in cooking, and meals are prepared according to their own state of health, the temperature and weather, and

any special needs of their family. All Moroccans are aware of the dietary rules, whether using traditional terms or ideas about vitamins, protein and calories. It is the empirical nature of the system, in which every meal and bodily sensation—not just those in illness—is an experiment, that makes it so viable. But modern food processing is having its effect on the system. While home-pressed olive oil is extremely hot, factory-bottled oil is less hot and vegetable oil of no value. A similar distinction is made between local brown flour and imported white flour. Tinned and packaged foods do not have the humoral value of their original components, and the diet system seems to be reflecting an anxiety that imported 'junk food' habits may not sustain a subtle but important level of health.

ILLNESS CLASSIFICATION

It is now possible to examine how illness is classified in Morocco, leaving aside ideas based on anatomical site, which do not form a coherent system, to concentrate on classification based on causation and treatment. Illness classification is not an explicit system in the minds of Moroccans, except with some healing specialists. There is a general reluctance to think or talk about illness in the abstract for fear of bringing it into being; and it is not always necessary for either healer or patient to ascertain cause before treatment is given, when the latter is a measure against all illness or depends on the personal predilection of the healer. (The exceptions are the hot and cold illnesses which are well-known and amenable to self-treatment.) There are, however, precise names and adequate clinical descriptions for most illnesses in the knowledge of lay people as well as specialists.

Classification by cause

With the above reservations, some idea of illness categories can be elicited by asking "What is the cause of this illness?" and "What illness does this cause?" from which the following divisions can be obtained (Fig. 5).

The first division separates natural from supernatural causation. All illness 'from God' has some mechanical explanation and is devoid of spirit involvement; the other three causes are supernatural, and the province of Prophetic medicine. Similar divisions are employed by *fuqaha* when they use such diagnostic aids as 'the string' (*el-xit*), but they divide supernatu-

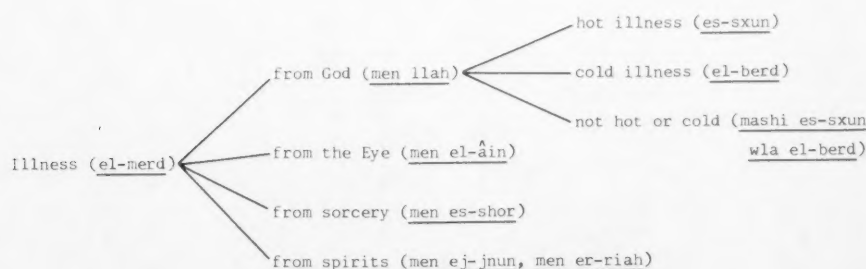


Fig. 5. Causes of illness.

ral cause between 'spirits' and 'man'. The *fqi* measures with a piece of string from the patient's right elbow to his fingertips, then reads from one of his texts over the string and the patient. On re-measuring, the string may be the same length as before, it may fall short of his fingertips, or be longer. If it is the same length there is 'spirit illness' or good health; if it is shorter the illness is 'from man' (*men ins*), meaning the interpersonal harm of the Eye or sorcery; if it is longer the illness is 'from God', meaning from natural events or accidents of circumstance in the material world, which include hot and cold illness.

Cause of illness thus falls into six categories: three natural—'hot', 'cold' and a miscellaneous non-humoral group; and three supernatural—spirits, the Eye and sorcery.

While no individual employs an actual classification of particular illnesses, it is possible for the purpose of this paper to synthesize a 'classification' by listing illnesses under their causes collected during fieldwork (Fig. 6). Those that appear more than once have different opinions as to their cause. For convenience English medical and lay terms are used when they appear to be cognate with Moroccan ones; otherwise these are translated literally.

The non-humoral category contains illnesses each with their own explanation. Thus diabetes ('sugar illness') is caused by eating too much sugar and treated by sugar-free diet, herbal medicines (some of which have been shown to have hypoglycaemic activity [17, 18]), and insulin; kidney failure ('salt illness') is caused by eating too much salt; asthma is the result of excessive talking and anxiety, or inhaling dust, and treated with herbs; gallbladder illness comes from eating too much fatty and spicy food, but is not a hot illness; jaundice can be treated by yellow medicines. Some illnesses are not cognate with Western ones. 'Slipped navel', for example, describes pain and diarrhoea resulting from sudden movements on an overfull stomach, and is treated by cupping of the umbilicus, bleeding from the vein above the left heel or pressure behind the left knee (cf. "dislocation of the umbilicus" as a cause of diarrhoea in Nagpur, India [13]).

The remaining categories confirm the survival of humoral and Prophetic medicine as separate elements in what is, in fact, a well-integrated pluralistic medical system. But how are they integrated? The classification in Fig. 6 shows that there is a group of long-standing painful or incapacitating illnesses that are

'FROM GOD' (NATURAL CAUSE)			(SUPERNATURAL CAUSE)		
NON-HUMORAL	HUMORAL IMBALANCE		'SPIRITS'	'MAN'	
	'HOT'	'COLD'		'EYE'	'SORCERY'
Asthma		Rheumatism	Rheumatism	Children's	
Goitre		Neuralgia	Neuralgia	sudden or	
Diabetes		Sciatica	Sciatica	serious	
Liver		Migraine	Migraine	illness	
Gallbladder		Tremor	Tremor		
Jaundice		Progressive	Progressive	Preogressive	Progressive
Spleen		wasting	wasting	wasting	wasting
Kidney		Paralysis	Paralysis		
Salt illness		-face	-face	Sudden	
Appendicitis		-limb	-limb	death	
Heart		Stroke	Stroke		
Slipped navel		Sudden	Sudden		
Piles		-blindness	-blindness		
Urinary		-deafness	-deafness		
difficulty		-mutism	-mutism		
Cancer		Barrenness	Barrenness	Barrenness	Barrenness
Headache		Impotence	Squint		
Worms		Arthritis	Tic		Impotence
Eczema		Lumbago	Epilepsy		
Hives	Acne	Cough	Madness		Madness
Scabies	Skin rash	Sore throat	Depression		Depression
Ringworm	Boils	Cold	Possession		
Impetigo	Full head	Influenza			
Lice	Red eyes	Bronchitis			Persistent
Cholera	Sunstroke	Pneumonia			-cough
Smallpox	Heatstroke	Indigestion			-itch
Scarlet fever	Babies' fever	Stomach cramps			
Leprosy	-rash	Intestinal			
Rabies	-diarrhoea	cramps			
Trachoma	-eye illness	Diarrhoea			
Cataract	-ear illness	Urinary pain,			
	Constipation	discharge			
	Measles	Red eyes			
	Tuberculosis	Earache,			
	Typhoid	discharge			
	Cholera	Mumps			
		Chicken pox			
		Whooping cough			
		Chilblains			
		Liver			

Fig. 6. Illnesses listed according to their cause, collected during this study.

attributed by some people to cold, and by others to spirits. While Moroccans make no distinction between this group and the remaining cold or spirit illnesses in their explanation of cause, a deeper analysis of these illnesses, and especially ideas about their proper treatment, will lead to a second classification of the cold and spirit categories and help to explain this syncretism.

The present concern is the nature of the ambiguity surrounding this group. Are they regular cold illnesses that are difficult to treat by humoral means? Or is 'cold' used as a euphemistic metaphor for spirit attack, as opposed to possession? Or are they a distinct group of illnesses from a contamination that is part mystical, part physical? Is the ambiguity in individual minds as well as between individuals, and does the ambiguity reflect a social change away from traditional beliefs about the supernatural world?

The attribution of spirit cause is complicated by the fear that thinking or talking about spirits may attract or offend them. Embarrassment, euphemism, irony and protective formulae surround their mention, so that while illnesses such as paralysis and barrenness may be attributed to spirits in abstract conversation, in the face of actual cases people may class them as cold. They may only diagnose spirits when, as in epilepsy, madness or gross personality change, they 'see' the possessing spirit in the behaviour of the person.

But there is a genuine distinction, based on the pathology of cold illness. Cold slowly penetrates deeper into the body. While it is still in the skin and flesh it causes coughs, colds, cramps, diarrhoea and discharges, with acute symptoms such as fever and general malaise. But once it has reached the bones or deep organs, perhaps as long as 15 or 20 years later, it causes deep pain, paralysis or barrenness, without acute symptoms. While cold is still superficial, it can be treated with hot foods and medicines and leaves no permanent harm. Once it is deep it is hard to remove with hot medicines, and needs treatment by a *fqih*, or powerful cherifian *baraka*. The implication again is that cold that penetrates deeply becomes transformed from a purely physical imbalance into a mystical contamination requiring the special medicine of that domain.

'Deep cold' illness

I shall call this group 'deep cold' illnesses. It includes arthritis, rheumatism, neuralgias, sciatica, migraine, tremor, wasting, stroke, paralysis, sudden blindness, deafness and mutism. They are in general chronic degenerative illnesses of middle and old age, in contrast to the milder, acute, self-limiting 'simple' cold illnesses.

How are the two distinguished by those who see them *all* as cold illnesses? Firstly, in the way they are mentioned: when the word 'cold' describes one of the deep cold illnesses, it is said softly with lowered eyes, expressing anxiety and embarrassment that is entirely absent in the mention of ordinary cold illness. Secondly, in how they are treated: deep cold is "cold that cannot be treated by hot medicines, it needs a *fqih*". The *fqih* himself may make the distinction by his choice of treatment, using for one case of cold, hot medicines and diet, for another writing out Qur'anic treatment. Thirdly, how illnesses respond to treat-

ment. Hot medicines are usually tried at first, but when they have no effect or provide only temporary relief in, for example, rheumatism and neuralgias (as with the 'deep heat' embrocations used in the West), a *fqih* or *cherif* is sought, and not much success is expected.

The commonest deep cold is *buzellum*, a sciatic pain down the leg from the hip. It is also called 'rheumatism', and the knee may be painful and stiff, with weakness or wasting of the muscles. It is usually attributed to cold from draughts or water, but sometimes to sexual contamination. For example,

Buzellum is cold, not from the outside but from women. They can give it to men and catch it from men, but originally it is from Eve's womb. All Muslim women bring this cold.

This idea of the danger inherent in female sexuality is also found in the ritual impurity of menstruating women, with whom intercourse would cause cold illness. But in both sexes barrenness, associated as it often is with pelvic pain and discharge—the consequence of abortion and venereal disease—is a cold illness that can be sexually transmitted either way. It has a place in the pattern of hot and cold symbolism in reproduction (Fig. 7). Barrenness is treated with hot medicines or pessaries to 'heat up' the sex organs; the Berber bride, at her wedding, crouches over smoking 'hot' incense to heat her womb and make her fertile. Menstruation is a cold condition, and the cramps are relieved by hot food. At childbirth hot substances are rubbed into the belly, "so that the contractions do not cool", and the birth leaves a baby that is hot and must not eat hot foods, and a mother and her womb that are cold, and must be revived with a special hot diet. The hottest known substance, ambergris, is taken by old men to restore their sexual vigour when they take young wives, but it should never be taken by those under the age of forty, as it produces boils and eruptions.

Deep cold and spirit invasion

It has been established that the deep cold illnesses imply a mystical and sometimes sexual contamination. A connection must now be sought between this contamination and the idea of spirit invasion held by some people to be the cause of these illnesses. For example:

Buzellum needs to be treated with hot substances, or by the *fqih*. It results from such things as getting your feet in water. My brother was playing in a fountain when suddenly his feet and legs hurt. They were almost paralysed with weakness. Perhaps the *jnun* had caused it. Therefore we called the *fqih* to write.

Here water could have been the source of cold. But spirits live in fountains and resent being trodden on by clumsy children; the boy's family thought this the likely explanation.

Spirits live in water; they also travel in winds. The linguistic link between winds and spirits is their common word root, RAH, from which come spirit, soul, self, breath and wind. The classical word for spirits, *ej-jnun* (night-beings, demons), is often considered insulting to them, and *ar-riah* is the commonest term. The word for winds is very similar, *er-reh*, but, as one

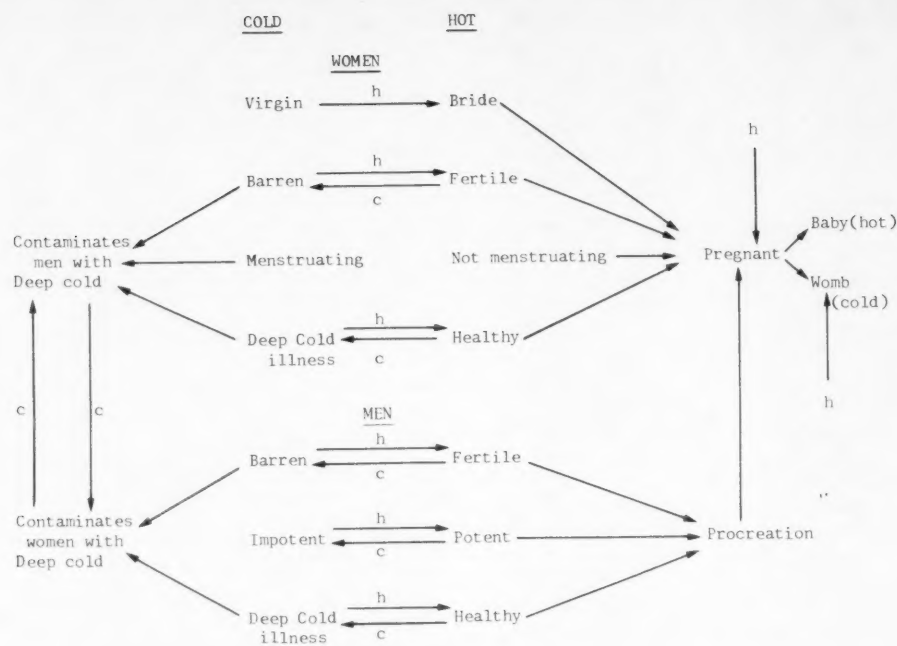


Fig. 7. Hot and cold in reproductive symbolism.

informant explained,

The wind does not bring the *jnun*—that is not why they are called winds. We use the word for winds in a slightly different form to mean *jnun* because they move and strike like a wind.

Whether illness from contact with winds and water is retrospectively attributed to spirits or cold is a matter for individual interpretation, and may depend on world view. Two healers, one a progressive and extremely orthodox *cherif* who denied the existence of spirits, the Eye, sorcery and *baraka*, the other a traditional *fqih*, gave identical accounts of how illness from draughts is caused, in the one case by cold, in the other by spirits. In both cases the agent entered the body and moved deeply to the bones, causing local symptoms, and spread through the body in the blood to cause a general malaise. Even their diet treatments were the same. In their food classification both were unusual in giving coriander as the only cold herb, but the *fqih* said it had a spirit in it (his only mention of spirits in food). He also said that cold illness predisposes to spirit attack: "when cold has entered, spirits can enter".

It seems that one conceptual structure can serve two world views. But not exactly—advocates of humoral causation look for dietary or environmental indiscretion; while those of spirit causation look for a breach of customary behaviour such as treading in a fountain, or suspect immorality by the victim. For them, leaving the house at night while very heated is not dangerous because of cold winds, but because it implies illicit sex. The dividing line, in the group of illnesses under discussion, depends on where, metaphorically, the source of harm that can enter and contaminate the body originates—in the natural world of Aristotle or the supernatural world of the Bedouin tribesman.

Classification by treatment

Just as the deep cold illnesses are distinguished from simple cold by the way they are treated, when the same illnesses are caused by spirits they are treated as spirit contamination rather than possession. The mechanism is one of attack and invasion rather than inhabitation by a spirit personality, and the spirit is expelled, without ritual or theatre, by a purely technical exorcism, using *baraka* institutionalized in Qur'anic magic or cherifian manipulations. By contrast, the other spirit illnesses—epilepsy, madness, depression and possession—are seen as inhabitation by a spirit personality, and are treated by ritual exorcism, i.e. invocation and expulsion during the victim's trance, using *baraka* personalized in the state and behaviour of the exorcizing *fqih* or *cherif*.

A second classification can now be drawn up, based on treatment rather than causation, in which the humoral category of Fig. 6 is separated into 'hot', 'cold', and 'deep cold'; and the spirit category into 'spirit invasion' and 'spirit possession', as shown in Fig. 8. 'Hot' and 'cold' illnesses are treated as humoral imbalance; 'deep cold' and 'spirit invasion' as contamination.

A few illnesses must remain separate in the shared category of contamination. Tic and squint were never attributed to cold, nor impotence, arthritis and lumbago to spirits, although the last three may be due to a deficiency in field-work.

When comparing classification by cause with classification by treatment, the differences are not always clear-cut. Some of the deep cold illnesses, the painful ones and barrenness, are treated with hot medicines as well as Prophetic medicine. So is it justifiable to distinguish two causes—cold as imbalance and cold as contamination—when many people assert that they are causally identical?

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The cause is cold. The victim has got overwarm in the baths or at home and then gone outside without sufficient clothing, and been struck by a cold draught on the affected part. The cold enters the body and moves in the blood deeply and painfully towards the bones, destroying the flesh if it causes paralysis. Nobody knows why it is called 'the Bride'. When someone is struck by the Bride there is no idea of a blow by a bride; one can be 'struck' (*derb*) by any illness. Nor is the Bride the wind or in the wind. The Bride is simply the illness.

Treatment, which is difficult, is by a *cherif*, either with the *baraka* of his saliva, rubbed into the skin or eaten in bread, or by letting out the cold through multiple cuts, applying heat with brands and rubbing in garlic, a very hot substance.

Sometimes another explanation is given in the Gharb for the Bride: a spirit strikes and enters the body, living in the blood and feeding on the flesh of the affected part to cause pain and paralysis. In the treatment, the *cherif's baraka* compels the spirit to leave, or he draws the spirit out of the body through the cuts and its hate of fire and garlic. There is still no reason for the name. The Bride is the illness, not the spirit.

Further south in The Middle Atlas, the Bride is not a common term for illness, but it may be heard in three contexts. Firstly as a name for one-sided paralysis of the face attributed to the slap of a spirit, and more commonly called *matrush*, the slap. Secondly as a name for the paralysis, deafness, temporary blindness, or madness caused by accidentally harming a spirit, through such actions as pouring water on ashes, emptying a hot teapot on the ground, or urinating on the ground without saying '*Bismillah*' (in the name of God); such illnesses are taken to the *fqih*, but are difficult to treat. Thirdly, *el-ârussa*, or the Berber word for bride, *taslit*, is sometimes used for an epileptic fit. It is said that some possessed people crave for meat; if they see meat they have a fit because the spirit in them needs the meat.

No explanation of the name was given in this part of Morocco, but in the southern city of Marrakesh, the Bride is the name of a female spirit with flowing hair and the legs of a monkey. If she is inadvertently harmed, she retaliates with blows that cause paralysis.

Again in Marrakesh the Bride is a name for Ayesha Qandisha, a female spirit well-known throughout Morocco. The stereotype story is that she appears as a beautiful and seductive girl to men when they are alone in the fields. The man makes love to her, and sometimes even secretly marries her, but then she changes into a hideous hag with long hair, a monkey's body with pendulous breasts and feet of a goat or camel. She becomes violent and demanding, and her victim may be struck with paralysis or deteriorate into a shambling, ragged, crazy outcast, wandering and homeless, the typical image of madness.

Naughty children are often threatened with "Behave, or Ayesha Qandisha will get you", and she is widely feared by children and adults. People hear the clanking of the chains around her neck and her weird cries at night, and it is said that fear of her "keeps men from seducing wives while their husbands are working in France". She is "the defender of women's honour".

To women she can be an ally in their struggle to influence events beyond their rural control in a male-dominated society. She is thought to live in the unusual trees, rocks or caves where women go to burn candles or tie knots of cloth as an '*ar*, or conditional promise, to sacrifice a chicken if she helps them. But women too can come under her power if they fail to keep these promises.

One solution for men and women made ill or possessed in this way is to join one of the spirit cults common among poor urban dwellers, such as the Hamadsha, described by Crapanzano [3]. At their meetings, named spirits, especially Ayesha Qandisha, are invoked and appear to those in trance and demand sacrifice, head-slashing and other self-mutilations. Healing is sought in attendance, perhaps for life, at these meetings, through a personal relationship with spirits—an open-ended commitment to an often incomplete participational form of exorcism, which Crapanzano calls a 'sympiotic cure'.

Thus 'the Bride' has a number of meanings: as a group of illnesses, practically all of the deep cold category, caused by cold and treated as deep cold contamination; as the same group of illnesses caused by spirit attack and treated as spirit contamination; as facial paralysis caused by the slap of a spirit; as spirit possession in the form of epilepsy; as a female spirit who paralyzes if injured; and as the dangerous Ayesha Qandisha.

It seems likely that all these meanings came originally from the typically ironic epithet for her, that has become a description of paralysis and associated illness, even when they are ascribed to cold. A bride's glance is considered dangerous—during the 3-day wedding she is veiled and must not look around at others, for this reason more than her vulnerability to the Eye—but her glance incites accident, fighting and murder; never illness [19].

'The Bride', like hot and cold, is a term whose meanings lie on a pathway between the inner and outer world. The pathway follows spirits from concepts to progressively more phenomenal entities; spirit illness types and their causation and therapy depend on this degree of phenomenal reality. Along the pathway can be traced cultural symbols that are hidden or implicit in ideas about deep cold illness, but explicit in the realm of mental illness, spirit possession and exorcism. This realm provides the meaning in ordinary illness that is suggested by the name 'the Bride'. "Normal thought cannot fathom the problem of illness", Lévi-Strauss says, "and so the group calls upon the neurotic to furnish a wealth of emotion heretofore lacking in focus" [20].

The neurotic realm is the prime concern of the Hamadsha brotherhood as a healing cult. Crapanzano divides the aetiology of spirit illness into the explicative and participational modes of responsibility. This relates to the distinction already made between spirits as concepts dealt with by institutionalized *baraka*, and spirits as phenomena dealt with by personalized *baraka*. Crapanzano's study concerns the second mode, and Ayesha Qandisha in particular. He notes that the Hamadsha were "able to effect, often dramatically, the remission of symptoms in paralysis, mutism, and sudden blindness, etc." but only when these were symptoms of functional, i.e. neurotic, hys-

terical or psychotic, illness, "they are, in their own fashion, superb diagnosticians, and generally avoid treating those illnesses which are regarded by Western medicine as organically caused. They seldom treat epilepsy" [3, p. 5]. Illnesses associated with participational spirits, at least in the Hamadsha context, can be seen as hysterical paralyses of movement or the senses, and the 'social paralysis' of the madness stereotype. The Hamadsha seem to be able to distinguish illness as psychosocial breakdown from organic illness.

Cure is not the only aim of their therapies. By becoming a cult member the individual is provided with a new social identity, set of values and cognitive orientation. "This new outlook may furnish him with a set of symbols by which—in the case of psychogenic disorders, at any rate—he can articulate and give expression to those particular psychic tensions which were at least in part responsible for his illness. This symbolic set is closely related to the cult's explanation of illness and theory of therapy" [3, p. 5].

Ayesha Qandisha and the symbolism of paralysis

In his structural and psychoanalytical analysis of Hamadsha legend and ritual, Crapanzano notes that in men, paralysis, impotence and barrenness all prevent the performance of the male role, and suggests that the hysterical symptoms in men are expressions of femininity and inadequacy in response to the tensions of this role. In Hamadsha therapy the subject's feminization is symbolically completed in his devotion to Ayesha Qandisha, and he is then revitalized through the 'male' *baraka* of the Hamadsha saints.

No analysis was made of the treatment of female patients. The broader dynamics of therapy must be assumed to include Ayesha Qandisha as the possible ally of women, as she is for Hamadsha men, only dangerous if neglected. Like the spirit that wrestled with Jacob, she strikes with lameness but also brings blessing to the underdog.

Moroccan men see women as sexually insatiable, promiscuous, capricious, treacherous and in league with the spirits, and at the same time weak, inferior, and non-contributory vessels for their children; and these attitudes are used to justify the seclusion and oppression of women. But to some extent they are shared by women about themselves and, with more reason, about men. At a deeper level these qualities may be the antithesis of the 'ideal' Islamic personality, the Constricted Self described by Lerner, [21] and are on this account dangerous for both men and women, as in Ayesha Qandisha who embodies some of them.

It is in the image of Ayesha Qandisha that the symbolism underlying attitudes to paralysis and associated illnesses must be sought. For it can be assumed that these attitudes, explicit in hysterical cases, are carried over to organic cases because the two are not distinguished, outside the Hamadsha, by appearance or cause. Ayesha Qandisha is desirable and seductive, and at the same time libidinous, quick-tempered and demanding. She attracts and then dominates men and punishes them with paralysis, barrenness or madness, undermining their male role [4, pp. 137–8]. More explicitly, Fatima Mernissi, a Moroccan sociologist, calls her "the castrating female" [22].

For a man Ayesha Qandisha's ambivalence reflects his ambivalence towards women, most acute in his conflicting attitudes of strong emotional dependence and gender/kinship superiority towards his mother. If the Arab 'solution' for men's ambivalence is the domination of women, the punishment for this 'social crime' may be apparitions of Ayesha Qandisha, the paralysing female, haunting those who cannot cope with the conflict. It could be said that, whereas in Europe spirits are the ghosts of wronged individuals haunting society, in Morocco this is the ghost of a wronged society haunting individuals.

The phenomenal origin of Ayesha Qandisha in the circumcision rite

While these apparitions may be symbols of psychosocial conflict embodied in collective tradition, it is possible to look for their phenomenal origins in remembered real events, whose "traumatizing power is immediately experienced as myth" [23]. Circumcision is the single childhood trauma that every Moroccan male experiences. Cansever has shown by psychoanalytical testing that Turkish boys after circumcision associated women with aggression and wounding, and represented themselves as feminized, and sometimes with *limbs missing* [24]. It has been noted that Ayesha Qandisha is used as a threat to naughty children. Are there any features of the circumcision ritual that might imprint in a boy her image as an ambivalent, paralysing, 'castrating' female spirit, and commit him to the Moroccan male view of women?

The word for circumcision, *tehara*, means 'cleansing', and its stated purposes are to make the child, aged between four and six, ritually clean, so that he can start going to the mosque and Qur'an school; and to make him completely male. From this moment he will spend his time more with his father and brothers. Circumcision severs the infant's anomalous ties with his mother's lineage, and places him fully in his patrilineage. Thus the ritual is outwardly orientated towards affirmation of his maleness.

But the boy's experience is of a different nature. Like all major feasts, circumcision is organized by women, but circumcision is called "the women's feast", and they particularly enjoy it, while the men stay uneasily in the background. The boy is brought in the lap of his mother's brother, sometimes ritually 'stolen' by surprise to the room or tent where he will be circumcised. One male informant said:

Circumcision is good because it is like what happens to a bride—the deflowering and the blood. It is the same for her as she sits fearfully waiting for her husband.

Outside, an aunt or old neighbourhood woman, the *aguza*, dances and cavorts in front of him. She is dressed in a long white robe, her hair is loose (a sign of sexual availability) and dishevelled, her face blackened with soot and her eyes and lips garishly made up. Sometimes wearing a chain around her neck which she strikes against a bowl, she chants and pulls grotesque faces at the boy. Her purpose is "to amuse him, to keep him from his pains", and the suggestion that she represents Ayesha Qandisha is vehemently denied.

The circumcision is done with scissors and the wound staunches with oleander ointment, the pain of which many adult men remember. On his return home the boy's hair, hands, and feet are dyed red with henna and his head wrapped in a headscarf, both of which are normally reserved for women. He sits where the bride does at weddings; often he is called "the bride of circumcision". Amber beads are tied to his ankles with red thread, which is also tied around the legs of chickens to treat their paralysis. Then he is coddled by his mother and the other women, who all crowd in to admire and touch his penis. His mother feeds him sweetmeats, and may kiss his open mouth and tell him, "Now you are a man".

Crapanzano has also observed some of these features of circumcision [3, p. 229], and suggests that this single childhood trauma might be at the root of Hamadsha men's feelings of inadequacy and femininity. But for all Moroccan men, the ritual seems structured as if to ensure the psychological effects that Cansever found, to mould the male ambivalence towards women and perpetuate its results, and to engender the symbols of conflict inherent in the male role. Further, it may be relevant to the group of paralyzing illnesses known as 'the Bride'; and it may be a continuous source of the image of Ayesha Qandisha, both as myth and apparition.

THE 'EFFECTIVENESS OF SYMBOLS' IN A PLURALISTIC MEDICAL SYSTEM

The Hamadsha therapy is centred around spirits as features of mental illness and hysterical, or functional paralysis, blindness and deaf-mutism. Through the resolution of the opposition between Ayesha Qandisha and saintly *baraka*, a symbolic transformation takes place which may restructure 'psychic reality' sufficiently to resolve the conflict producing the symptoms. In "The Effectiveness of Symbols", Lévi-Strauss has suggested that in organic illness such transformations may also be capable of restructuring 'physiological reality' through the inductive property of symbols whose structure is analogous to organic structures. Whether this version of Frazer's analysis of magical efficacy is warranted [23, 25], it is certainly close to the Moroccan understanding implicit in the therapy of organic paralysis, etc. when seen as contamination by spirits. But in these mundane organic illnesses the symbols lie dormant, embedded in conventional attitudes and mechanistic treatments, and sealed over by fear of illness and the supernatural. They only become explicit and therefore 'potent' in the areas peripheral to organic illness, i.e. the functional illnesses and the minor symptoms of humoral imbalance. At these poles ideas about illness are clear from their experience; in the centre they are drawn in as metaphors, the only available tools in the face of illness that is difficult to treat yet demands some action.

This central position of the contamination illnesses in the continuum of humoral and spirit illness is shown in Fig. 9. The illnesses range from transient bodily discomfort through serious physical illness to psychosocial incapacitation; their cause from physical cold through bodily contamination to a mystical marriage to Ayesha Qandisha, and their treatment from physical heat through humoral heat and institutional

baraka to personal *baraka*, along a chain of progressively expressive and culturally-determined therapies.

The central group of illnesses are characterized by a contamination that can ambiguously belong to either the humoral or the Prophetic medical system. Analysis of this ambiguity has shown a profound syncretism between the two historically and philosophically distinct systems at their interface, where an almost perfect homology exists between, for example, the two explanations for the symptoms and treatment of 'the Bride'. This syncretism shows the radical modification of the Galenic theory of equilibrium that is evident in Moroccan humoral theory, and is most extreme in the 'deep cold' illnesses, where cold contamination cannot be removed by humoral allopathic treatment and resembles the mystical contamination or impurity of the Prophetic system and its Bedouin antecedent.

What unites these particular illnesses, mostly chronic disorders of the nervous system and barrenness, in one category of 'contamination' might be the idea, from private experience and cultural explanation, that pain can precede loss of function: the pain being understood in terms of humoral theory; the loss of function in terms of spirit vengeance. And the onset of muscular weakness that may precede paralysis can be projected, as in Jacob's dream, as a struggle with an outside force or being, or felt as a loss of life-energy [26]; these are understandable in terms of the spirit and humoral systems respectively.

But Moroccans do not recognize the separate systems or the pluralistic nature of *dua musselman*: they are pragmatists and a hypothesis is validated by a cure [3, p. 149]. Their choice of explanation between cold and spirits often seems arbitrary, and the creative possibilities of being able to choose between a natural, morally-neutral and a supernatural, morally-charged cause of an illness are only occasionally observed. The contamination illnesses are quite rare, and an elaborate prospective study would be needed to elucidate this point. If anything, choice reflects the degree of commitment to beliefs about spirits, which appears to be diminishing with social change and the slow infiltration of Western medical ideas.

Some elements of Western therapy are being incorporated into the Moroccan belief system. It is considered most effective in the simple humoral illnesses, particularly when diets are part of the treatment, and penicillin is a very hot substance because of its success in cold illness. X-rays may be seen as revealing the site of cold, blood sampling as removing it, and injections as inserting heat directly. The humoral system stems from the same philosophical tradition as medical science, and such affirmations of it may assist the process of change away from the belief in spirits, the Eye and sorcery. One herbalist, describing how sorcery is dying out, said "but the feelings still come, so we still sell the remedies". And while the supernatural world view is being eroded by social change, the humoral view of health is being adapted and maintained as a viable practice.

But the internal ambivalence of the contamination illnesses is creative for the participants in that it allows cultural and ecological factors to be brought into the response by the patient and society to organic illness. The epistemologically private inner perceptions of illness can be experienced as social cate-

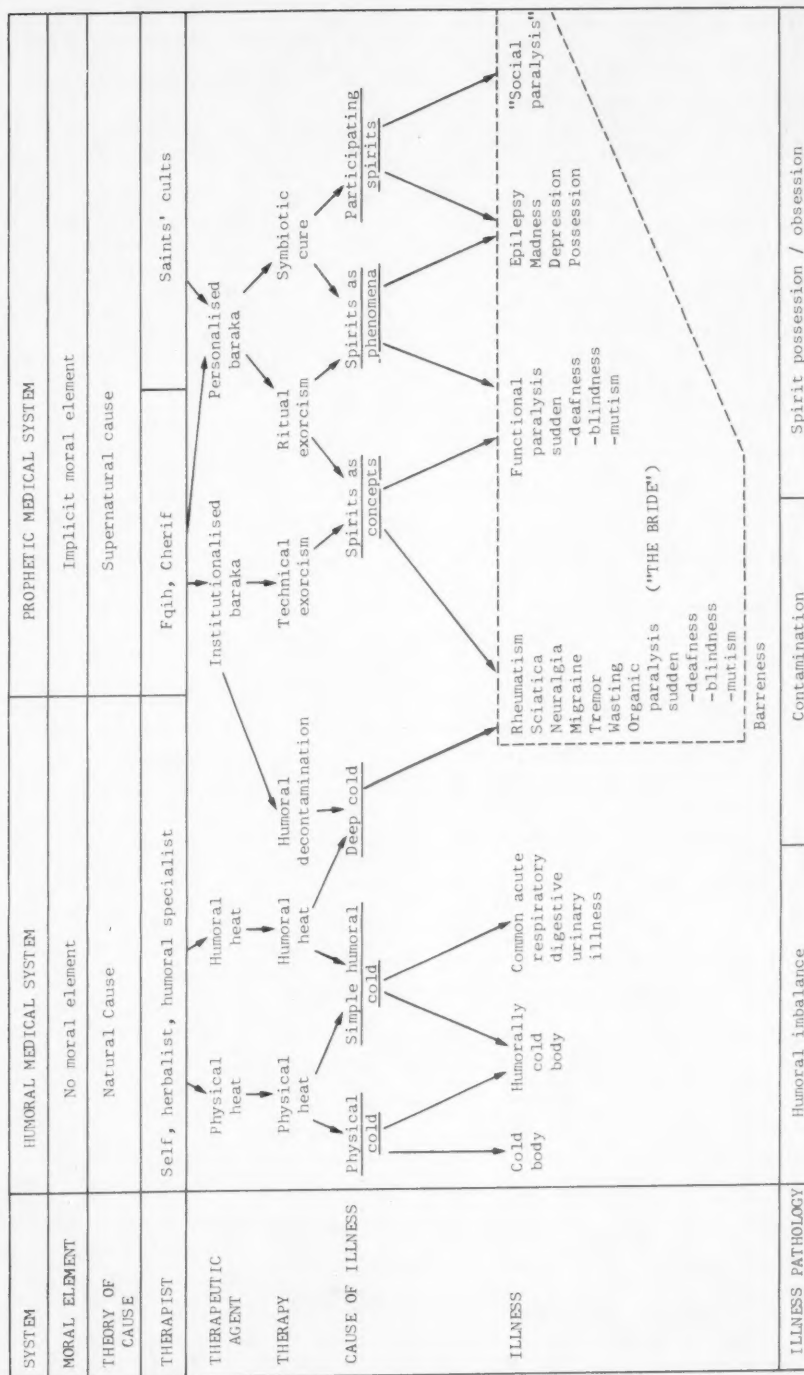


Fig. 9. The place of the contamination illnesses in the humoral and prophetic systems.

gories of the shared worlds of the mystical and physical environments; and the cultural values of these worlds are reaffirmed as the illnesses occur.

These processes are interesting for ethnomedicine's contribution to medical epistemology, where the problem of the reality of physical illness has often been avoided. There is a natural reluctance to define where empiricist medical language and emic concepts of biological changes legitimately overlap, so that the self-evident biological common ground is left as no-man's-land. It might be reasonable to start with perceptible physical signs that are interpreted as illness both by the participants and medical science, and to try to clarify the logical status and social nature of diagnosis and therapy in these conditions. Such a criterion would allow the examination of the role of ritual in therapy from the biomedical viewpoint, both in Western medicine [27] and traditional systems.

No one doubts the effectiveness of suggestion, as it is normally (and very little) understood, as an element in bringing about the physiological processes of healing by alteration of the patient's psychological and social state away from one supporting the condition of illness. This is very apparent in Moroccan medicine where therapies are intimately related to the patient on many levels. But to say that Moroccans are satisfied with their treatment of physical illness is little more than a tautology. Some explanation must be given for their popularity when they are seen in actual cases to be ineffectual, and when some form of Western medicine is available.

Firstly, people insist that they are effective, and can cite cures of paralysis, for example, to prove it. But it is not necessary to invoke here the explanation, suggested by Lévi-Strauss and Crapanzano, that a powerful and specific type of suggestion is operating at a level where symbolic manipulations can effect specific physiological changes (although some of the remarkable psychosomatic phenomena exhibited during hypnosis, for example, still await explanation). Traditional therapy can be very effective in functional conditions, and the cures of paralysis are likely to have been in functional rather than organic cases, undifferentiated by the participants. (One curious case was the treatment of a Swiss man with a paralysed shoulder by a Gharb *cherif*, which I witnessed. His condition was certainly organic, with objective evidence of nerve damage that had persisted for a year. A few days after his treatment of 'the Bride' by branding, scarification and diet, he began to make a recovery which was almost complete.)

Secondly, Western medicine is not culturally appropriate to deal with supernatural aetiologies. Although the doctor's examination may occasionally be seen as imparting some form of *baraka*, he obviously does not have the qualities, inherited or acquired, to treat supernatural illness. Moreover, in the contamination illnesses, Western medicine can offer no cure either, and the Moroccan response to them, by drawing explicit symbols from two areas of shared experience—environmental cold as a pathogenic agent of the ecological domain, and spirit encounter as a feature of the neurotic domain—into the implicit understanding of their symptoms and signs, relates the private experience of organic illness to shared social categories in a way that may have value from the biomedical

viewpoint. In making full use of the ambiguities in their pluralistic medical system, they may come closer to a notion of effective treatment.

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KNOWLEDGE OF ILLNESS AND MEDICINE AMONG COKWE OF ZAIRE

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Abstract—This paper analyses the structure of Cokwe medical knowledge in the context of the occurrence of illness. Their knowledge of illness and medicine grows out of several centuries of contact with neighboring peoples, and, most recently, with Europeans. The paper makes four main points. First, that Cokwe classification of disease can best be understood as based upon a series of principles by which diseases are identified. Second, that the ascription of causation is more important in the choice of treatment than in the diagnosis of disease. Third, that causal explanations change when illnesses are unresponsive to treatment. And fourth, that one can best understand the importance of the various categories of medical knowledge when those categories are placed within specific episodes of illness.

INTRODUCTION

This paper analyses the structure of Cokwe medical knowledge in the context of the occurrence of illness and the options for medical care presently available. I shall present Cokwe theories of disease classification and medical causality as they are used in the management of illness, in order to show how Cokwe classify their medical knowledge and how that knowledge is used in the process of diagnosis and seeking treatment.

The study of medical knowledge in most African communities today is complicated by the fact that individuals have access to medical care directed by practitioners whose training and explanatory theories derive from at least two different traditions: a bio-medical one and a local (ethnomedical) one. This has been true of many Cokwe communities for at least 40 or 50 years. Scholars have most frequently examined such situations as examples of how two distinct medical systems operate in one society, with individuals choosing one system, or the other, and sometimes both, for the same illness [1]. Such an approach tends to exaggerate the importance of 'belief' and underlying explanatory theories in understanding behaviour related to illness.

With the increasing interest in the relation between medicine and culture [2,3] and the comparative study of medical systems [4] some scholars are beginning to speak of medical pluralism or pluralistic medical systems [5,6]. This opens the way for the diachronic study of medical systems as they are generated by the efforts of laymen and specialists to alleviate illness. Research in this vein can show how that medical knowledge is part of the sociocultural context in which it originated, and how that this knowledge changes over time.

Cokwe knowledge of health and illness grows out of several centuries of contact with neighboring peoples and more recently with Europeans. Although certain features of their present medical knowledge are clearly of European origin, one cannot determine which features, lexemes or concepts, are 'traditionally Cokwe' and which are of non-Cokwe origin without extensive linguistic and ecological comparison with neighboring groups. Moreover, the people who regard

themselves as *Tucokwe* (sing. *Kacokwe*) have a mixed ethnic origin which includes Lunda, Minungu, Lasa, Mbela, Shinji, and Songo, among others [7-9]. The heroes that Cokwe consider their founding ancestors were part of the migration of Lunda noblemen southward some 400 years ago.

Although Cokwe [10] are part of the group of peoples related to Lunda and they speak about the paramount chief (*Mwati Yav*) with great respect, the Cokwe language is more closely related to Lwena, Minungu, and Luvale, than to the language spoken by the Lunda of Kapanga (Kiruund). Thus many of the disease lexemes, names of curing rituals and cults of affliction, are the same in Cokwe as in Luvale, for example [11]. Although their relation to Lunda-Ndembu is more distant, Cokwe share with them many lexemes that identify medicines, cures, and rituals [12,13].

My analysis of Cokwe medical classifications is based upon field work conducted in two Cokwe communities in southern Zaire: the villages just west of Sandoa in western Shaba province and those just south of Kahemba in southern Bandundu province. The majority of Cokwe live in Angola, and until very recently, there have always been regular contacts across the border. A comparison of my data with that of two Portuguese anthropologists who have worked in Angola indicate that there are only minor sociocultural differences between the two populations [7,14].

Although the traditional basis of Cokwe production has been hunting and horticulture along with long-distance trade, almost all Cokwe today are subsistence farmers. Descent is reckoned matrilineally and post-marriage residence is virilocal. Cross-cousin marriage is a stated preference. Villages are characteristically small (40-80 individuals) and frequently moved as the need for more land or the separation of disputing factions make it advisable. Given the recent shifts in population of northern Angola and southern Zaire, plus the lack of reliable census data, it is not possible to give an accurate estimate of the total Cokwe population. In 1960 Marie-Louise Bastin, who worked in era of relative calm, estimated the population of Cokwe in Zaire and Angola at 600,000 [15].

The comparative study of medical systems in Africa

has been hampered by the fragmentary character of information on medical ideas and practices, by ambiguities in the choice of relevant data, and by the assimilation of the study of medicine into studies of magic, witchcraft, and religion. Indeed anthropologists have frequently been less interested in the study of behaviour related to illness than in using their observations of that behaviour to explain social relations [16]. That picture is changing, however, as scholars make the medical ideas and practices of specific communities their primary focus of research. This is part of an effort to develop a language that can serve to describe and compare the experience of populations with disease and illness within their specific sociocultural context. Research in this domain in Africa, however, is relatively new [17-21].

It has long been considered axiomatic that Africans regard most illnesses as caused by supernatural forces. A corollary to that principle states that illness always has social and moral implications. Yet as Eva Gilles has recently argued, ethnographic accounts of African ideas of causation have tended to be too sweeping, "and have not taken sufficient note of discriminations made by the actors, both between different kinds of illnesses and between the levels of aetiology and pathogenesis" [22]. This can be rectified, at least partially, by considering the principles of disease classification separately from those of causation, and by then placing both within the context of the social interactions which give them validity.

With this in mind I have divided my discussion of Cokwe medical causality and classification into four parts. In the first part I briefly discuss Cokwe conceptions of illness, medicine and medical practitioners. In the second part I present the principles of disease classification, or Cokwe nosology. The third part is devoted to notions of causality and their use in diagnosis and treatment. In the final section I discuss certain patterns discernable in illness episodes, emphasizing the processual nature of the search for appropriate treatment.

ILLNESS, MEDICINE AND MEDICAL PRACTITIONERS

Any inquiry into medical knowledge or a medical system among Cokwe must formulate criteria for determining what constitutes relevant data. We can be sure that the ideas and practices that Cokwe consider relevant to illness will not be isomorphic with those considered relevant by physicians. With the exception of some studies of mental illness, most ethnographers working in Africa have assumed biomedical criteria in deciding what is relevant to the study of disease and illness. They have focused their attention primarily on the activities of specialists, diviners and healers, showing clearly the role of these specialists as social adjudicators of conflict or the articulators of explanatory theories [23, 24]. This has followed naturally from the observation that in much of sub-Saharan Africa, illness is a sub-set of misfortune in general, and these specialists (diviners) determine the cause of misfortune and prescribe remedial treatment. While this body of literature has provided great insight into African systems of thought [25, 26], it has

told us relatively little about how communities manage episodes of illness.

This research among Cokwe focused primarily on those ideas and practices that Cokwe, both laymen and specialists, consider as related to illness (*yikola*). So defined, illness is a condition that demands remedial action through the use of medicine (*yitumbo*). In other words, one can distinguish behaviour related to illness from other types of activities on the basis of Cokwe cognitive categories. It is true that Cokwe diviners handle many different kinds of misfortune in addition to serious illnesses: unsuccessful hunting, loss of jobs, failure in school, repeated instances of "bad luck" and major accidents. By focusing primarily on Cokwe definitions of illness and illness episodes, however, one can include laymen's knowledge as well as that of medical practitioners, and one can also examine illnesses treated with family remedies or those taken to a dispensary. One is thus not limited to cases taken to specialists for consultation.

The condition of illness, or being sick, must be seen in contrast to being well, or "feeling normal". For Cokwe this is indicated by two contrasting verbs (*kuhinduka* vs *kuyiza*). The state of one's health, both physical and psychosocial, is the subject of everyday conversation. Indeed, the most frequent subjects of conversation in villages are the health of family members and the quality of food available.

There are three Cokwe terms that may be glossed as "illness". The term *yikola* refers to a condition, an individual disorder or abnormality, recognized because of perceived pain and/or some physical or behavioral dysfunction. The generic meaning of the term is "pain", but it has been extended to label any condition in which pain is perceived. Although used less frequently, another term, *musongo*, is used sometimes as a synonym for *yikola*. This term generically refers to particular illnesses or diseases, but by extension may also refer to feelings of pain. Yet a third term, *weji*, refers to a group of diseases known to be especially severe or dangerous. These are diseases that often prove fatal, namely: smallpox, tuberculosis, leprosy, syphilis, and abdominal tumors. Some individuals also include sleeping sickness and epilepsy in this group. The same root morpheme yields the term *mweji* (patient), which means any individual under the care of a medical practitioner.

Of these three terms, *yikola* is the most general and corresponds closely to the use of illness in English. Although their usage varies contextually, the other two terms connote more of a specific disease or a syndrome. Since the most general term *yikola* is also the most common, I shall henceforth limit my discussion to its usage.

The central concept in the domain of medicine is *yitumbo*, which can be glossed simply as medicine. The term applies to any substance that can affect the internal state (physiology) of living things, effects that are not empirically observable. These effects may be prophylactic (protective) or may promote healing. The term applies to medicinal substances of any origin, including biomedical drugs. The core meaning can be seen by noting that it applies, by extension, to substances recently introduced such as yeast for baking bread as well as fertilizers and insecticides.

The main ingredient in all Cokwe medicines comes

from plants (*mitondo*), used in the generic sense (plants, bushes, trees, etc.). Plant substances are usually mixed with water, oil, or white clay for administration to the sick. Since most adults know the proper use of some plants to treat common illnesses, the use of family herbal remedies are commonly used.

In addition to medicine derived from plants, Cokwe healers have at their disposal substances of animal origin, *khau* (sing. *lukhau*). Only healers (*mbuki*) and diviners (*tahi*) have the knowledge to use *khau* in their treatments and/or prescriptions. In the treatment of illnesses caused by sorcery or by ancestors the use of these substances is obligatory, but they are rarely used otherwise. Although some of the animals from which *khau* are obtained are common, others are rare, and still others are mythical creatures not visible to ordinary observers. The healer or diviner associates some characteristic of the animal with either some aspect of the illness or a desired action by the patient. For example, a certain kind of beetle is used in the medicinal preparations for epilepsy (*cikonya*), for just as this beetle curls up and plays dead when frightened, so should the epileptic curl in upon himself and stop flailing about. Thus the healer metaphorically associates elements of the natural environment on the realm of social relations.

Within the Cokwe medical system three specialists, all identified by a title, are recognized as having specialized roles in the process of diagnosis and treatment of illness: the healer (*mbuki*), the diviner (*tahi*), and the nurse (*fulume*). The term healer is more appropriate as a gloss for *mbuki* than herbalist, for although all *mbuki* are herbalists, most of them play a wider role. Some Cokwe healers, men or women, work as general practitioners; others specialize in the treatment of only a few diseases. They are not full-time practitioners, however, but earn their livelihood in other ways.

Diviners act primarily as diagnosticians for cases of illness that display particularly dramatic symptoms or become chronic or severe. They establish the personal and specific cause of illness and prescribe the proper medicines and rituals for recovery. Although diviners use many different sorts of instruments, the complex divining basket described by Victor Turner for Lunda Ndembu is common among Cokwe as well [12]. Some diviners also act as healers.

The third medical specialist, the nurse (*fulume*), works exclusively within a dispensary or a hospital. As the local representative of biomedicine, he diagnoses cases brought to him and treats them with drugs. When it is logistically feasible he may refer serious cases to the hospital. Nurses command respect and there is a great demand for biomedical drugs. The majority of cases brought to dispensaries are diagnosed as malaria, intestinal disorders, and respiratory diseases. The drugs prescribed are primarily anti-malarials, vermifuges, and antibiotics.

There are two more medical specialists who occasionally play a role in the process of diagnosis and treatment of illness: the *kabuma* and the *ndoktolo*. The *kabuma* (also known as *cimbanda*) is a diviner specialized in the detection and neutralization of sorcery instruments. Although the number of cases taken to a *kabuma* may be small in relation to the number of illnesses in general, these specialists command far

more esoteric knowledge than ordinary diviners, for the process of neutralizing and purifying sorcery instruments requires the participation of lineage members in a complex series of rituals.

The *ndoktolo* (or *medicin*), is the physician based in a local hospital. Few Cokwe have occasion to consult a physician, for during the past ten years the Zairian government has been unable to persuade physicians to remain in Sandoa or Kahemba except for very brief periods of time. Nevertheless, physicians are greatly respected for their surgical skill.

Curiously enough, the physician and the specialized diviner have certain characteristics in common. They are both custodians of the most esoteric knowledge in their specialties; they also handle only the most complex cases, for they are consulted only as a last resort. Thus most Cokwe see far more of nurses and healers than of these two specialists.

THE CLASSIFICATION OF DISEASE, COKWE NOSOLOGY

In the diagnosis of disease and illness Cokwe rely upon visible and palpable signs of dysfunction as well as verbal statements about internal bodily states, either physical or psychosocial. As I discuss further in the final section of the paper, laymen do have some notion of pathogenic changes within the body and are quick to label illnesses. There is a continuum rather than a sharp break between laymen's and healers' medical knowledge, particularly in diagnosis. A patient who recovers from an illness treated by a healer has the right to be told about the treatment upon full payment, and thus knowledge about herbal cures does spread. Many healers begin their practice by curing others after their own recovery.

Nevertheless, healers do have more knowledge of internal bodily processes than laymen. The organs most often mentioned with respect to disease are the heart, the brain, the intestines, the blood, and the lungs. The healers near Kahemba paid particular attention to pathogenic changes in the blood and the intestines. A poor diet, for instance, may cause thinning of the blood or a reduction in its normal quantity. The blood may at times become "long" or "dark", causing pain and constriction. A worm in the abdomen may become displaced or malnourished; as a result it will begin to "bite", causing great discomfort.

Because of the distribution of medical knowledge and the public nature of both diagnosis and treatment, there is a common sense quality to the labeling of disease. That is, the diagnosis is usually self-evident. Most changes from health to illness stem from changes in the physiological state of the body, and this knowledge is more important in the process of treatment than in the diagnosis. If however, there is reason to believe that the illness stems from some outside agent acting on the sick individual, then the entire process of diagnosis and treatment shifts in emphasis to the consultation of a diviner and/or a Cokwe healer who then directs the therapy.

My usage of the terms disease and illness, either separately or together, stems from an extension of the distinction made in biomedicine. As Eisenberg states it, diseases are "abnormalities in the structure and

function of body organs and systems," while illnesses are experiences of "disvalued changes in states of being and in social function" [27]. Thus patients suffer illnesses while physicians diagnose diseases. This distinction between the experience of patients and the judgment of medical practitioners can be useful in understanding any medical tradition. In fact, medical systems differ widely in whether they are oriented to disease or to illness [3]. I use disease when I wish to emphasize the knowledge of the most expert Cokwe healers, and illness when I wish to refer primarily to the experience of laymen. The distinction becomes easily blurred, however, in a medical system which gives great attention to illness (as do Cokwe). Yet, as mentioned earlier, the slight difference in the two terms glossed as illness (*yikola* and *musongo*) does reflect this distinction.

I base my discussion of disease classification upon an analysis of 75 disease lexemes familiar to healers and to most laymen as well. The list could be greatly expanded to several times the size with more intensive study of disease with healers only. For the elicitation of these lexemes I began with responses to the question, what illness do you have? In Cokwe as in English, responses to this question include symptoms, illnesses, diseases, ailments, as well as statements about personal tragedy. The list includes only those responses that were clearly recognized as *yikola* that required treatment in cross-checks with both laymen and healers.

Studies of disease classification in Africa have been few and primarily of two types: the presentation of categories of disease according to one or two criteria, or the construction of folk taxonomies of disease according to ethnosemantic methods. Examples of the former can be found in the works of Evans-Pritchard, Orley, and Zemleni [23, 28, 29]. The best example of the latter is found in the work of Warren among Techiman Bono [21]. The use of only one or two criteria to classify disease lexemes yields relatively little information and emphasizes etiology at the expense of empirical observation. The problems inherent in the construction of folk taxonomies, on the other hand, are recognized by Warren in his presentations [30]. These difficulties are inherent in the formal analysis of any domain (not only disease classification) and are linked to the process of decontextualization [31].

Such studies aim to discover the logic behind the naming of diseases and their classification into distinct categories. Unless otherwise stated, researchers are seeking to discover the principles which serve to link observable symptoms and signs of disease with specific disease lexemes and those which group diseases into larger categories. A recent study of disease classification among Ngbandi by Gilles Bibeau [17] demonstrates the variety of associations possible between symptoms and disease names as well as the inadequacy of using etiological criteria in disease classification. Although my results differ somewhat from his [32], my presentation of Cokwe disease classification follows his lead in discussing the principles by which diseases are named and classified.

There are really two types of principles used to distinguish diseases one from another: those concerned with the naming (labeling) of the diseases and

those which group diseases into major categories. In the first type the relationship between the signs and/or symptoms and the disease lexeme is based upon anatomical location, upon resemblance to something in the natural world, or on the identification of a pathogenic agent. Principles of the second type are those of relative severity, of differing population at risk, and of etiological referent. The principles are similar to those noted by Bibeau for the Ngbandi, by Evans-Pritchard for the Azande, and by Orley for the Baganda.

The principle of anatomical location is used in all medical systems in the description of symptoms and the diagnosis of disease. In Cokwe, location more frequently identifies symptoms than diseases. However, an example of a disease so labeled is *jimo lya ndondo*, characterized by the accumulation of foreign substances in the lower abdomen, leading to painful abdominal distention.

A few diseases derive their name from a resemblance between observed phenomena in the natural world and some manifestation of the disease. This principle of association by analogy is familiar from numerous ethnographies and has become part of the debate on modes of thought in Africa. The disease *kabaza*, in which sharp headache pains are likened to bolts of lightning (*kabaza*), serves as an illustration.

Some diseases are identified by the pathogenic agent responsible for the main symptoms. For example, the disease *cibulutu*, characterized by severe, prolonged pains in the lower abdomen, is caused by a worm of the same name.

The principle of relative severity is frequently part of the diagnosis of disease. For example, various skin rashes are diagnosed differently according to the severity of itching, skin discoloration, and inflammation. A disease characterized by uncontrolled speech or speaking nonsense becomes a different, more serious disease, if the afflicted individual begins to curse his relative and use obscene language.

The identity of the population at risk—men or women, children or adults, Africans or Europeans—frequently enters into the diagnosis. For example, sterility in men and women is differently labeled and treated. Whether epilepsy occurs in children or adults changes the diagnosis. The same is true for a particular kind of pain in the side.

Finally, some diseases are grouped and named by etiological referent. For cases of illness taken to a diviner for diagnosis, the determination of the ultimate cause may enter into the diagnosis of the disease. For example, a case of severe, chronic headaches will be diagnosed as a case of *yanga*, if the symptoms are caused by a displeased ancestor.

It should be clear that these principles operate at different levels of generality and are used in conjunction with each other. The list of principles is not exhaustive, for more intensive study of disease lexemes with expert healers might reveal additional ones or other ways of sub-dividing the ones presented (different types of analogies, for example). The rationale for some disease names is lost in Cokwe linguistic history. Nevertheless, there are features of Cokwe knowledge by which diseases are differentiated. The first type of principle (anatomical location, analogical association, pathogenic agent) identifies the intellec-

tual process by which a particular disease is labeled. The principles of the second type are used in two ways: to name diseases but also to classify them into categories. For example, Cokwe distinguish between diseases that are often fatal (called *weji*) and those that are not, which uses the principle of relative severity to classify. As will be shown in the next section, the principle of etiological referent is used to divide diseases into three possible categories according to their causes. Yet the same principle also serves to name some diseases. A set of symptoms that includes dizziness, troubled dreams, and general lassitude may be diagnosed as *yikola ya afu*, a condition caused by visitations of the spirits of deceased kinsmen (*afu*).

MEDICAL CAUSALITY: COKWE ETIOLOGY

The comparative study of disease etiology has received a great deal of attention in ethnomedical studies. For example, Foster states that, "disease etiology is the key to cross-cultural comparison of non-Western medical systems" [33]. The privileged position of etiology for the comparison of medical systems is implicit in the title of this conference. In Africa scholars have long been interested in why people consider that many diseases are caused by spirits, ancestors, or sorcery. Other kinds of causal explanation have received far less attention.

In the preceding section I have shown that principles of causality are but one aspect of the process of naming and classifying disease among Cokwe. Notions of causality are crucial, however, in the choice of therapy, for they establish limits within which the appropriate therapy is chosen. That may be one reason why etiological principles have received so much attention from anthropologists. Much less attention has been paid to the study of the circumstances in which diseases are diagnosed as caused by personal or impersonal agents, and the process of interaction by which that decision is reached.

Among Cokwe one finds three different conceptual categories of medical causality: *yikola ya Zambi* (diseases of God), *yikola ya cilowa* (diseases caused by sorcery), and *yikola ya mahamba* (diseases caused by displeased ancestors). All illness episodes fall into one of these three categories, for the change from a state of health to a state of illness may stem from physiological changes induced by the natural environment, from changes induced by the use of sorcery instruments, or from the forces of the ancestors.

The term *yikola ya Zambi* applies to diseases which have an impersonal cause which arises from events in the natural world. People readily recognize that ordinary circumstances such as a change in the seasons, a poor diet, or exposure to dust in the air or to a cold rain may lead to illness. An association is made between an event in the natural world and a loss of health without necessarily a knowledge of the exact mechanism of the change that occurs. The word *Zambi* refers to the creator God, the force behind the shape of the world and human events. Those who work and worship in a Christian context often speak of *Zambi Tata* (God the Father) rather than simply *Zambi*, suggesting a more personalized notion of God. However, the construction *yikola ya Zambi* should not be read to imply that God (*Zambi*) has sent ill-

ness. It is, rather, a statement that in the normal course of human events people do become ill. The category "diseases of God" is the same as what John Janzen describes as "disease of God" among Bakongo [18].

A second major category of disease is *yikola ya cilowa*, also known as *yikola ya wanga* (diseases caused by sorcery). The term *wanga* refers to the force or power manipulated by sorcerers (*nganga*) to harm, while *cilowa* is the noun which refers to the action of manipulating sorcery objects against an individual. This category of illnesses differs from the first category in several important ways. First, it involves two distinct causes: a personal, ultimate cause, identified as a human agent, and an immediate, or instrumental cause, seen as objects sent into the body of a victim. Leonard Glick refers to these two types of cause as efficient and instrumental causes [34].

Second, illnesses in this category can only be treated by Cokwe healers (*mbuki*) capable of counteracting the power of the sorcerer with their own medical knowledge and removing the (pathogenic) objects sent into the body of the person afflicted. Third, only illnesses with dramatic symptoms or those unresponsive to treatment are placed into this category. And fourth, only a diviner can determine whether an illness is indeed due to sorcery and identify the person responsible.

The third major category of disease causation is *yikola ya mahamba*, which are diseases caused by displeased ancestors. In this context the term *hamba* (pl. *mahamba*) refers specifically to ancestors, to maternal kin. Because of the multiplicity of its referents the concept of *mahamba* is extraordinarily difficult to translate. The term may be applied to specific syndromes, to the redressive ritual, to objects used in such rituals, to any symbol of ancestral activity, or to the force of the ancestors (cf. Lima, 1971). Thus in some contexts a *hamba* may be a spirit, in other contexts a carved object, a shrine, or some other manifestation of lineage ancestors.

As with the diseases caused by sorcery, only a diviner can determine that an illness is caused by some particular *hamba* and prescribe a ritual remedy. By a process of elimination a diviner determines if the problem concerns the maternal grandparents and from there the search for wronged ancestors is narrowed until one person is identified as most concerned. This person is an ultimate, or efficient, cause; there is not, however, an immediate cause that corresponds to the sorcery objects. The person afflicted, however, may experience a force or a presence in the body whose trace must be removed.

Despite the multiple referents possible for *mahamba*, their medical importance lies primarily in their use as names of therapeutic rituals. The various *mahamba* known to Cokwe today are not illness or disease lexemes; they designate, rather, the intrusion of an ancestral force along with the appropriate ritual of redress. This concept of *mahamba* corresponds with research among ethnic groups adjacent to Cokwe, as seen in the works of Turner and White [13, 35]. For these scholars *mahamba* constitute 'cults of affliction' in Turner's sense. This also applies to Cokwe, in that *mahamba* are ritual responses to affliction; I did not, however, see any evidence of ongoing ties among

those treated, as Turner describes so clearly for Lunda Ndembu.

The kinds of *mahamba* known to Cokwe of Kahemba include *cimbangu*, *ngombo*, *masando*, *tumbunda*, *manjanga*, *tukuka*, *tuhemba*, *malemba*, *akishi ambala*, and *majinga*. The list is meant to be illustrative rather than exhaustive, for there are many local variations in the names and they change over time. There is also some variation in their specificity: a small child that appears to be wasting away may be troubled by *cimbangu* or by *ngombo*, but not by *masando*, for the latter applies only to cases of financial adversity. Two other *mahamba* always concern sterility in women. What ties all *mahamba* together is their association with the well-being and fertility of the local lineage; they all have to do with illness of small children, sterility, poor hunting, or personal misfortune.

The importance of these redressive rituals (*mahamba*) has diminished in the past few decades. In discussion about the origin and importance of *mahamba* people consistently said that they are far less frequently invoked now than in times past. I interpret this as an indication of the changing status of local lineage social units, for these rituals are associated with the rights and obligations of local matrilineages. As young people migrate to towns and as social mobility increases the local group of matrikin becomes less important. This change is accompanied by a reduction in the importance of hunting as a source of food and by increasing numbers of women giving birth in maternities rather than at home. White has noted similar changes among the Luvala of Zambia [36].

In addition to the differing therapeutic implications of these three major categories of illnesses, the three categories also differ markedly in their relative numerical importance. Using as a baseline the 75 main diseases mentioned earlier, I discussed with several healers the possible origin of each of these diseases and from there discussed causation. They considered that most of these diseases had natural or impersonal causes, some could have either personal or impersonal causes, and a few were always ascribed to personal (sorcery or ancestor) activity. There is some flexibility in the ascription of causation, as I discuss in the final section, for there are always atypical cases and extenuating circumstances. Nevertheless, it seems worthwhile to note that the large majority of these

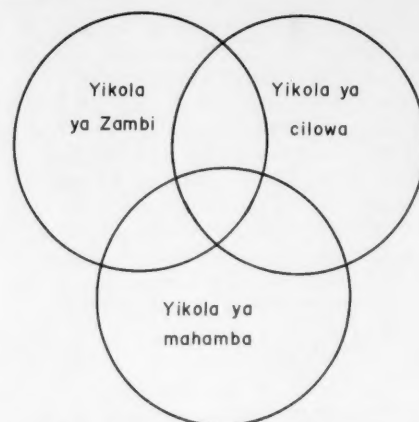


Fig. 1. Overlapping categories in Cokwe medicine.

lexemes label conditions whose cause is found in the natural environment.

These statements about the relative frequency of the lexemes within these etiological categories disguise three aspects of Cokwe etiology that should not be overlooked. First, these are not statements about the incidence of disease. Many of the illnesses that fall into the category of *yikola ya Zambi* are self-limiting ones. They are also the ones that occur most frequently. Second, in terms of the time, energy, and financial resources required, the illnesses diagnosed as sorcery-related are far more demanding than the other two, for they are generally chronic disorders which demand complex treatment over a period of time. They also require open discussion of social conflicts within the lineage group. Third, a simple description of the etiological categories fails to reveal the dynamic character or flexibility of the etiological system itself. Although some cases of illness appear unambiguous, in many other instances the diagnosis and etiology is the subject of much discussion, particularly if symptoms do not respond to treatment.

The basic contrasts in the three categories of medical causality are summarized schematically in Table 1.

The contrastive nature of the categories in Fig. 1 become clearer if we consider the therapeutic alternatives which they imply. Diseases that are caused by changes in the natural environment can be treated by medicine (*yitumbo*) alone. These medicines may be herbal remedies prepared by family members or a Cokwe healer, or they might be drugs obtained priva-

Table 1. Categories of Cokwe medical causality

Cause	Individual in nature	Individual in society	
	<i>Yikola ya Zambi</i>	<i>Yikola ya cilowa</i>	<i>Yikola ya mahamba</i>
Immediate (instrumental)	Yes	Yes Sorcery instruments	Yes Spiritual force of ancestors
Ultimate (efficient)	No	Yes Sorcerer	Yes Ancestor
Relevant relationship	Individual in natural environment	Individual in local matrilineage	Individual in contact with lineage ancestors

tely or from a dispensary. For example, dizziness may be treated with eye drops from the nurse or from a healer and administered by anyone. In cases of suspected sorcery most patients seek treatment at two levels: at the level of immediate cause herbal or biomedical drugs are taken to relieve symptoms; at the level of ultimate cause a healer is consulted to extract the sorcery instruments from the body, to neutralize the sorcery power (*wanga*), and to cleanse the patient's body from any ill effects. For instance, in one case of epilepsy (*cikonya*) in which sorcery was suspected, the patient used antibiotics from the dispensary (after a fall into a fire), sedatives from a healer, and he and his family participated in a number of rituals designed to neutralize the sorcery and cleanse the body of its traces. Similarly, for illnesses caused by displeased ancestors, when there is pain involved a patient will use drugs for relief but will also consult a healer who can organize rituals to persuade the *hamba* (ancestor) to leave the body.

The nature of treatment (drugs and therapy) in cases of suspected sorcery activity or displeased ancestors differs from naturally-caused diseases because the power involved is personal. That is, a personal agent has willed harm to someone and has used his/her extraordinary knowledge against the patient. The healer who accepts such a case engages his/her knowledge and power against the protagonist. In the rituals required to neutralize the power of sorcery the healer begins with an invocation of his own teacher and source of esoteric knowledge, publically declaring that his knowledge is legitimate and sufficient to counteract the sorcerer or to persuade the ancestor to relent. The power of sorcerers can be directly countered, while the ancestors must be persuaded. The power to harm and to heal stems from knowledge about the use of objects and substances that are mysterious and extraordinary, conveying metaphorically the desires of the sorcerer or the ancestor. The healer must counter these actions with his own metaphors, often the same ones, but which in his/her hands are legitimate and therefore positive rather than negative. The entire procedure is a carefully orchestrated ceremony performed in the presence of the patient and at least one member of the immediate family, which demonstrates the personal power of the healer. In this case knowledge is indeed power.

Scholars have frequently observed that diviners and ethnomedical healers are consulted primarily for illnesses that are unresponsive to treatment. Less frequently noted, and far more difficult to examine, are the circumstances in which this transition occurs within episodes of illness. This transition corresponds to what Horton has described as a contrast between common sense theory and higher level theories about the causation of disease [25]. We cannot understand the importance of explanatory theories of disease causation outside of the social interaction through which diagnoses are made and appropriate treatment is sought. By examining the events that make up episodes of illness we move one step closer to such an understanding. A focus on illness episodes permits the study of behavior related to disease and illness within pluralistic medical systems where patients choose to consult practitioners from differing medical traditions.

ILLNESS EPISODES: THE CONTEXT OF CAUSALITY

While it is intellectually satisfying to tease out the logic of disease names and discover the bases of the classification of certain elements within one ethnomedical system, there is really less there than meets the eye. In order to understand the significance of diagnostic or causal categories we must examine them as used in specific episodes of illness. We need valid information about the kinds of factors which determine how individuals move from one event to another in their search for effective therapy. The situation is exactly like that outlined by Feinstein for biomedical practitioners in his work on clinical judgement. "Clinical judgement depends not on a knowledge of causes, mechanisms, or names for disease, but on knowledge of patients" [37]. In the same vein our knowledge of Cokwe management and interpretation of disease and illness cannot depend upon our knowledge of the logic of naming the causal categories alone. Hence the emphasis upon illness episodes.

An illness episode refers to the series of interactions concerning a specific case of illness which begins with the first sign or symptom in one person and continues until remission (or death). For heuristic purposes an episode may be divided into particular scenes: discussion of a diagnosis, consultation of a diviner, a visit to a dispensary, the preparation of medicines, etc. The constituent elements of each scene can then be examined (time, place, instrument, interaction, and participants) to see how decisions are made regarding the sick individual and how evidence is evaluated.

Physicians generally distinguish between signs and symptoms as indicators of disease. Signs consist of directly observable or quantifiable phenomena while symptoms are changes in the state of mind or body noted by the patient [38]. Signs are considered as firmer evidence than symptoms for clinical diagnosis. In Cokwe diagnosis, however, both the observable signs and any subjective statements by the patient or the family are considered important. For example, if it is known that a husband and wife have been quarrelling seriously and one of them begins to suffer from severe back pains or chronic dizziness, the family will be more likely to check out possible sorcery with a diviner than if relations are harmonious. A person suffering from headaches and troubling dreams will be treated for both symptoms. Thus indicators of both the physical and psychosocial state of an individual are included in diagnosis.

One might also say that Cokwe have *only* observable phenomena and subjective statements available for making their diagnosis. That is not strictly true, in that diviners sometimes participate in diagnosis. Yet most diagnoses are made with relatively little esoteric knowledge about disease. The specialized knowledge of healers concerning internal changes within the body from physiological processes or sorcery is used more in the selection of medicines and therapy than in diagnosis itself.

This common sense aspect of diagnosis makes it easy to understand the important role of kinsmen in the diagnostic process. The group of kin most affected by illness in one individual is the local matrilineage of

the sick. This group shares the burden of the illness episode: loss of labor (in case of adults), the initial diagnosis and seeking of treatment, the anxiety concerning recovery. The costs in terms of time, energy and cash are also shared. This same group also decides if and when a diviner or healer should be consulted, fully realizing the risks of exposing friction among members of the larger lineage. The responsibilities of the matrikin are less important than those described by Janzen for the Bakongo, because Cokwe lineages are smaller, more widely dispersed, and have less of a corporate identity.

As long as the patient's recovery proceeds as expected, Cokwe explanatory theory involves images of physiological changes within the body or changes that are hidden from view. If a child who suffers from severe anemia or kwashiorkor (*katota*) recovers following treatment, that is evidence that the cause was a poor diet, as anticipated. A person with tuberculosis (*tulwa mukaka*) recovers when the lesions in the lungs heal and the blood begins to circulate normally again. For sleeping sickness, smallpox, and leprosy Cokwe have no causal explanation in particular; some healers state that they cannot cure these diseases.

Failure to recover normally or the advent of dramatic symptoms initiates inquiry into the social aspects of illness. These dramatic symptoms include vomiting blood, repeated fainting spells, epileptic seizures, or cursing one's relatives and removing one's clothes in public. For such unambiguous signs of serious disorder the local lineage must decide what to do. Likewise, these kinsmen will determine at what point an illness has not responded to treatment and the field of both medicinal treatment and therapy must be expanded. This permits a great deal of variability and negotiation in the decision-making process. It also presumes a sense of the normal prognosis of an illness. One might say there is a notion of the 'natural history' of illness.

The system of medical ideas and practices which Cokwe have developed to manage episodes of illness includes the following salient characteristics. First, it is the sick person's kin group which decides on the appropriate therapy and assumes the costs. Second, most diagnoses are made by this group of kinsmen on the basis of their own observations and the statement of the afflicted. These diagnoses may or may not be linked to etiology. Third, each step in the process of diagnosis and treatment involves discussion among the participants. Fourth, herbal treatments are widely used in various stages of treatment. Fifth, if a diviner has determined that sorcery or ancestral activity are involved, a healer treats a patient for both the physiological symptoms and for the ultimate cause, invoking his own personal power against that of the sorcerer. If the episode involves *mahamba*, the healer must persuade rather than force the offending power or spirit to desist.

By placing a study of medical causality and classification within the framework of episodes of illness, we are better equipped to examine both the negotiated character of the ascription of causality and the structuring of illness management by the wider social and cultural context of society. An adequate ethnography of illness [39] requires both an examination of behavior related to disease and illness and analysis of

the conceptual categories which give meaning to the experience of illness.

A focus on episodes of illness permits us to examine causality from a slightly different perspective. Table 1 presents the categories of medical causality as contrastive in several ways. But if we examine a case of illness as it develops over time (episode) and ask how causality is determined at any specific point, the picture looks slightly different. The diagram of overlapping circles shown in Figure 1 represents the causal explanations possible for a specific illness. Any illness will always be placed within some part of the encircled space. While some illnesses are always considered as caused by changes in the natural environment, others are always caused by sorcery or by ancestors. Of greater significance, however, is the fact that some illnesses have two possible causal explanations, and a few have all three. In other words, the ascription of causality is a process that involves the evaluation of many factors within an episode of illness. These factors may lead to shifting etiological category from one circle to another, as often happens when a patient develops dramatic symptoms or an illness becomes chronic.

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UNITY IN DIVERSITY IN A POLYETHNIC SOCIETY: THE MAINTENANCE OF MEDICAL PLURALISM ON MAURITIUS

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Abstract—Mauritius is a polyethnic society that provides an ideal situation in which to study medical pluralism. The population of this Indian Ocean island predominantly consists of individuals of Indian, African, French, and Chinese origin; Hinduism, Christianity, Islam, and Buddhism are all represented on the island. A wide variety of both secular and religious healing resources are encountered on Mauritius, many of which are associated with particular ethnic and/or religious traditions. However, except for a few of the religious specialists, most practitioners are consulted by individuals of diverse ethnic and religious backgrounds.

In this paper I examine the medical belief system and health-seeking behavior of Mauritians in order to delineate both the conceptual and behavioral mechanisms contributing to the maintenance of medical pluralism. Despite the heterogeneity of the population, lay individuals tend to hold similar beliefs about the causes of illness and to construct similar categories of illness. Mauritians believe that illness may result from a wide variety of factors and that no single healing tradition is capable of dealing with all of these. Therefore, the medical belief system and the distribution of medical knowledge require and promote the maintenance of diverse healing traditions. The decision-making process during quests for cure is structured in such a way that it allows patients to consult a variety of healing traditions for particular illness episodes and to utilize over their lifetimes a diversity of healing resources.

The medical belief system on Mauritius is a consistent, unified system that promotes the maintenance of ideologically diverse healing traditions and the acceptance of newly developed or newly introduced therapeutic resources. It is, thus, well adapted to the social history and social heterogeneity of the island. It does, however, exhibit some characteristics that are not usually reported in other less heterogeneous societies, and the question arises as to whether these correspond to the extent of medical pluralism and/or ethnic heterogeneity in other sociocultural contexts.

INTRODUCTION

Mauritius is a polyethnic society that possesses a wide variety of healing traditions. It presents us with a plural medical system in which new healing traditions have been introduced continually by each wave of immigrants to the island. It is, thus, an ideal situation in which to study medical pluralism and the conditions contributing to the maintenance of diverse therapeutic alternatives. One might expect that each healing tradition on Mauritius would be utilized and supported largely by members of its own ethnic or religious group. However, upon investigation into the patient populations of each type of practitioner, one finds that this is not the case: patients of most practitioners represent a wide variety of religious and ethnic groups. Moreover, over their lifetimes, Mauritians tend to utilize practitioners from many ideologically diverse healing traditions and move freely from one type of healing resource to another for particular illness episodes without experiencing ideological conflict. How is this accomplished? What are the systems of thought that lead to this pattern of utilization of healing resources?

In this paper I first briefly describe the population and history of Mauritius and the numerous healing resources available on the island. I then investigate Mauritian concepts of illness causation and behavior during illness episodes in order to gain an understanding of the mechanisms, at both the conceptual and behavioral levels, that permit the acceptance and use of multiple healing traditions by patients and

thereby allow for the perpetuation of medical pluralism on Mauritius.

HISTORY AND DESCRIPTION OF THE MAURITIAN POPULATION

Mauritius is an island of 720 square miles, lying approximately 500 miles east of Madagascar. It was uninhabited until the 17th century when the Dutch briefly settled there. However, the first permanent settlement was not established until the 1720s. From this time until the 1830s, the population consisted of French planters and their slaves who were brought in mainly from Madagascar, Mozambique and Guinea. Slavery was abolished in 1835 and the mandatory apprenticeships were completed by 1839.

Indentured laborers were recruited from India to work on the sugar plantations beginning around 1834 and the Indian population of the island nearly tripled in the years between 1851 and 1861 (from 77,996 to 192,634). By 1871 the Indian laborers accounted for 95% of the agricultural work force. The majority of indentured laborers elected to remain in Mauritius after their contracts had been fulfilled. There were 153,693 immigrants recorded by 1871 and these consisted mainly of individuals from the regions of Calcutta (57%), Madras (32%) and Bombay (7%). Indian artisans and skilled craftsmen were also among the immigrants during the second half of the 19th century. Chinese merchants began to appear in Mauritius between 1860 and 1880 and then again in the early 20th century.

In 1972, the population of Mauritius was 826,000. It consisted of 565,000 Indo-Mauritians, 24,000 Sino-Mauritians, and 237,000 'General Population', a category that includes individuals of mixed African and European ancestry, Franco-Mauritians, and all other non-Indian and non-Chinese groups. Hinduism, Christianity, Islam and Buddhism are all represented on Mauritius. Adherents to the various forms of Hinduism make up the majority of the population (51%) and Christians (predominantly Roman Catholics) are the second largest religious group (31%). Seventeen per cent of the population is Muslim and less than 1% is Buddhist, Confucian and 'Chinese religion—unspecified'.

METHODS

This report is based on the first thirteen months of an eighteen-month field project (March 1979–April 1980) focusing on Mauritian medical beliefs and practices. The project consists of two major parts:

- (a) an in-depth study of illnesses and misfortunes experienced by members of 32 households (189 individuals) situated in two small towns in the southwest; and
- (b) a study of a sample of practitioners from each healing tradition.

Monthly interviews with household members have allowed me to obtain data on responses to illness, choice of healing resources, and the classification of illness. To date, information on 279 illness episodes has been collected from these households [1].

The sample of residents consists of 21 Creole and 11 Indo-Mauritian (Hindi and Marathi-speaking) households. All but three of the male heads of household are either fishermen or manual laborers. Forty-seven per cent of the female heads of household are employed. Except for one seamstress, all of the others are manual laborers. Eighty per cent of the two heads of household are illiterate. Of the children who are over 15 years of age or no longer in school, 21.9% have had no education and 43.8% hold a grammar school diploma. None have completed secondary school.

The data obtained from practitioners include theories of causation, methods of diagnosis, treatment procedures, and training received. Information has also been collected on a sample of patients treated by the practitioners (sex, ethnic group, age, religion, symptoms and when possible, previous use of other types of healers for the illness presently being treated) in order to compare the patient populations of each type of healer. To date, information has been collected on 8 biomedical practitioners, 1 homeopath, 2 traditional Chinese doctors, 2 herbalists, 2 folk herbalists, 5 specialized secular healers, 5 religious specialists or shrines and 4 sorcerers.

HEALING RESOURCES AVAILABLE ON MAURITIUS

A wide variety of both secular and religious healers are encountered on Mauritius, reflecting the great ethnic, religious and cultural diversity that exists on this

tiny island. The types of healing resources available are described below and their characteristics are summarized in Table 1.

Biomedicine

Biomedicine is widely distributed in several forms: (1) the Government Medical Service that provides free medical care; (2) sugar estate dispensaries that provide free care for their employees; (3) private physicians and clinics; and (4) nurses and pharmacists. The overwhelming majority of biomedical practitioners are Mauritian and consist of representatives from most of the ethnic groups on the island. Mauritians, therefore, have numerous biomedical resources to choose from at a variety of prices and representing a wide array of ethnic groups. Members of all ethnic and religious groups have been observed to utilize the services of biomedical practitioners. The particular type of practitioner consulted, however, is to a great extent determined by geographical and economic factors.

The *Government Medical Service* consists of eleven hospitals, containing a total of 2836 beds [2], and approximately 45 dispensaries that are distributed throughout the island. The dispensaries are manned by full-time nurses and visited regularly by physicians. In some regions the physician has consultation hours daily, but in other, less populated areas, he may consult on only one or two days per week. There are also Family Planning and Maternal and Child Health Clinics throughout the island, many of which are based at the local dispensaries. They offer consultation on family planning, ante-natal care, and treatment of children up to the age of five. The government employed 280 physicians in 1978, 102 of whom were specialists [2]. The ratio of government doctors per population was, thus, 1/3249. The number of hospital admissions for 1978 was 90,443 indicating a very high turnover rate of 31.9 patients per bed.

The government system, although it is widely distributed and accessible to most of the population, suffers from a shortage of facilities. This results in long waiting times for patients at the outpatient clinics and dispensaries as well as long waiting lists for patients to be admitted to hospitals and overcrowding in the hospital wards. In 1958 there were 2266 hospital beds, yielding 15.3 patients per bed, and even then "the Annual Report of the Medical and Health Department... states: 'The demands on the available accommodations have since many years reached saturation point' [3]".

Since 1958 the government service has improved greatly in its ante-natal and family planning programs. It has also considerably increased the number of doctors per capita from 1/6685 to 1/3249. Nevertheless, patients and physicians complain that government doctors are overloaded with work and able to devote little time to each patient. An increase in the number of doctors would help to alleviate this situation, but only if accompanied by an increase in the facilities available for the processing of out-patients and accommodation of in-patients.

Sugar estate dispensaries are found on all of the major estates. They are manned by full-time nursing personnel and visited regularly by private doctors employed by the estates. Minor illnesses are treated

Table 1. Types of healers on Mauritius and the categories of illness treated

Type of healer	General illness categories treated	General illness categories diagnosed	Ethnic group of practitioners	Specialties or type of ailments within general category most frequently treated
(a) <i>Secular</i>				
Biomedical	Illnesses of God	Illnesses of God	Varied	All
Homeopathic	Illnesses of God	Illnesses of God	Franco-Mauritian	Chronic
Chinese	Illnesses of God	Illnesses of God	Sino-Mauritian	Chronic
Professional herbalist	Illnesses of God	Illnesses of God	Tamil	Varied—especially chronic and common minor ailments
Folk herbalist	Illnesses of God	Illnesses of God	Predominantly Creole	Varied—common minor ailments
Specialized secular healer	Illnesses of God	Illnesses of God	Predominantly Creole	<i>Tambave</i> , sprains, <i>fraisere</i> , skin rashes, rheumatism kidney ailments
Sorcerer	Dead souls/fright, illnesses of Evil/sorcery	All	Varied	All
(b) <i>Religious</i>				
Hindu <i>maraz</i>	Dead souls/fright, saints	All	Indo-Mauritian	All
Sai Baba temple	All	—	Indo-Mauritian	All
Tamil <i>poussari</i>	Dead souls/fright, saints, sorcery	All	Indo-Mauritian	All
Buddhist sisters	Dead souls/fright, sorcery	All	Sino-Mauritian	All
Christian clergymen, shrines, healing sects	Illnesses of God, dead souls/fright, sorcery	—	Varied—Predominantly Franco-Mauritian and Creole	All

on the spot while more serious cases and those requiring further diagnostic tests are referred to the government hospitals. Many large factories also employ nurses and physicians to care for their employees and they function in much the same way as the sugar estate services.

Private physicians and clinics (which offer both in-patient and out-patient care) are situated largely in the urban areas. In 1978 there were 96 private medical doctors and 6 private clinics recorded [2].

The consultation fees for private physicians reported to me by residents range from approximately 25–100 rupees (\$3.50–13.00).

Nurses and pharmacists also play significant roles in the medical care of the Mauritian population. Some nurses maintain private practices at their homes in urban areas during non-working hours. The total number of nurses engaging in private practice, however, is unknown and their status is quasi-legal. They usually charge minimal fees (approximately 10–25 rupees, \$1.30–3.30). The few patients I observed were dissatisfied with the care they had received at government facilities but, yet, were unable to afford the fees charged by private physicians. I would estimate that the nurse I observed treats at least 15–20 patients per day.

Pharmacists, who are usually situated in the major towns and cities, also may be consulted for a variety of ailments—from coughs, colds and headaches to anemia, parasites and birth control. This is to a great extent due to a common belief that medicine bought

at the pharmacy is better than medicine dispensed by the government services.

Homeopathic, Chinese and Ayurvedic medicine

I have located only two sources of homeopathic treatment on Mauritius, both of which are located in urban areas. One is a Franco-Mauritian practitioner who conducts his practice part-time. He states that most of his patients consult him for particular ailments that have not been satisfactorily treated by allopathic physicians. Many have chronic ailments such as asthma and allergies. The other is a healing center that is associated with an ashram and run by homeopaths trained in South Africa.

Given the large Indian population on Mauritius, it is surprising to note that, as far as I can determine, there is only one practicing Ayurvedic doctor on the island. He currently operates two pharmacies in towns containing large Indian populations.

At present, only biomedical practitioners are licensed to prescribe drugs, perform surgery, be affiliated with hospitals, and perform official functions such as the writing of birth and death certificates and issuing of certificates for sick leave. It is possible that the limitations that would be placed upon the activities of Ayurvedic physicians in Mauritius may in part explain the scarcity of Ayurvedic resources on the island.

Chinese doctors and acupuncturists practicing in Mauritius suffer from the same limitations since degrees in Chinese medicine are not recognized by the

Mauritian government. There are few Chinese doctors on Mauritius. I have met two and have heard of one other. These doctors maintain practices in the capital city. All of them were born in Mauritius but received their training in China. Their treatment in Mauritius is legally limited to acupuncture and traditional Chinese herbal remedies.

The patients of the one Chinese doctor I have observed consist of all ethnic and religious groups. While some families (mainly Chinese) consult him first for all illnesses, the majority of his patients consult him for particular cases, many of which are chronic disorders. Most of the patients had already consulted biomedical practitioners and obtained no relief from their symptoms. Asthma, sinusitis, epilepsy, rheumatism, hemorrhoids, urinary calculi and kidney stones seem to be among the most frequently treated ailments.

To date, I have located three Chinese pharmacies, all of which are located in Port Louis. Besides being called upon to fill herbal prescriptions written by Chinese doctors, the pharmacists may be consulted directly by patients about various ailments. The pharmacists stock the dried ingredients from which to prepare herbal mixtures as well as a wide variety of patent Chinese medicines for the treatment of most common, minor ailments.

Professional herbalists

There are at least three full-time professional Tamil herbalists on Mauritius who maintain stalls in urban markets. They represent the third generation of herbalists in their families. Their grandfathers had been herbalists in India before immigrating to Mauritius and the tradition has been passed down from father to son.

They are consulted for a wide variety of ailments and list 34 ailments on their business cards as being treatable by herbs. During a preliminary study of two herbalists in the capital city in 1977 [4, 5], I found that gastrointestinal disorders, diabetes, liver jaundice, fever, emmenagogue, skin ailments and heart disorders (including palpitations) accounted for 63% of the illnesses treated.

The herbalists utilize approximately 150–200 different plant species. Although the pharmacopeia of the grandfathers of the herbalists may have been largely of Tamil origin, it is clear that today the pharmacopeia consists of a mixture of Tamil, European, and indigenous Mauritian components. Approximately 25% of the plant species utilized are indigenous and/or endemic to Mauritius. Most of these would not have been known to the immigrants from India and their use as medicinal plants must have been developed on Mauritius. Moreover, the herbalists read literature on European herbalism and frequently incorporate into their pharmacopeia those species that are available or can be cultivated on Mauritius.

In 1977, members of all of the ethnic groups were observed to utilize the services of the herbalists except for Franco-Mauritians, and each herbalist treated an average of 33 clients per day [4, 5]. Many of their clients buy remedies for illnesses that have been diagnosed by biomedical physicians. Natural herbal remedies are frequently preferred over biomedical

treatment for chronic ailments such as hypertension, diabetes, and rheumatism or alternated with medication to "give the body a rest from all the medicine". Herbal remedies may also be utilized because they cost less than medicine from pharmacies. I found that the average fee charged by the herbalists was 2.25 rupees (\$0.38) with a range from \$0.04 to \$1.70.

Folk herbalists

Folk herbalists consist mainly of middle-aged or elderly individuals who are well versed in the use of medicinal plants and who may be the descendants of a type of local herbalist-healer that no longer exists. According to most people, they are quite numerous but declining in number because their knowledge is not being passed on to the younger generations. I have met two women who fall into this category, a Creole/Chinese and a Creole. Both obtained their knowledge from Creole grandparents who, they say, had been professional 'healers'. These women grow medicinal plants in their gardens, are well known in their communities and are consulted for a variety of ailments. They do not charge for their services or advice.

Specialized secular healers (Dimun ki fer passe, ki marké)

These healers may practice either full-time or part-time and utilize medicinal plants, passes and prayers to heal specific types of illness. They are quite numerous and may be found in most towns and villages throughout the island. There are both male and female healers of this type. Most ask no fee but will accept gifts. Some ask for minimal compensation for herbal preparations. In most cases, a patient would never be expected to spend more than approximately 5 rupees (\$0.67) for treatment. The overwhelming majority of these healers are Roman Catholic Creoles and this tradition appears to be a blend of European and/or African herbalism and Christian practices such as the laying on of hands. It seems to be quite similar to the herbalist tradition among smallscale White farmers on the neighboring island of Reunion, described by Benoist [6], and may be of similar origin.

The illnesses treated by this type of healer are quite specific. They consist mainly of: sprains and pulled muscles (*foulire*); skin rashes and infections (*dartes*); aches and pains resulting from rheumatism or arthritis (*doulere*); backaches associated with kidney ailments (*les reins*); 'coldness' (*fraisere*); and *tambave*.

Fraisere and *tambave* denote syndromes that are recognized by the majority of Mauritians and believed to be curable only by specialized secular healers. *Fraisere* is characterized by chronic coughing, sneezing, or respiratory congestion and is believed to be caused by coldness that is trapped in either the head or chest through the absorption of cold water or air. *Tambave* is characterized by chronic skin eruptions on the bodies of infants and children, especially around the head and face, and may be accompanied by gastrointestinal disorders. It is believed that this illness results from unclean blood and that the skin eruptions and/or diarrhea develop in order to release the poisons that are in the blood. The poisons orig-

inally enter the body via food that is eaten either by the child or, more commonly, by the mother during pregnancy or nursing.

Healers of this type usually specialize in treating one or two of the illnesses described above. I have met only one woman who can treat all of them and she is well known all over the island. Her waiting room is almost always occupied and I would estimate that she treats about 10-20 patients per day.

The treatment procedures are either passed down within families or learned through apprenticeships. The knowledge of the correct prayers and passes is secret and it is believed that one may pass on this knowledge to only one or two individuals or else one will lose one's own healing powers. The healers maintain that each one knows different prayers and that some are more powerful than others. They each also use different recipes for their herbal remedies. Some have stated that their ultimate power depends upon God and that they must live lives of devotion, dedication, and virtue. Others, however, seem to believe that the power to heal rests in the prayers, passes and herbs themselves.

Patients of these healers represent all ethnic groups. While some may use the healers as a first healing resource, especially for *tambave*, sprains, and pulled muscles, most patients I have observed had tried several other healing resources before consulting the healer.

Religious temples, shrines and specialists

Religious specialists, temples and shrines of all of the major religions represented on Mauritius may be consulted in times of illness and misfortune. Individuals usually consult religious specialists for ailments that have not responded to other types of treatment or for specific syndromes that are generally believed to be of spiritual or supernatural origin. The main religious healing resources consist of Hindu *maraz*, a Hindu healing temple devoted to Sai Baba, Tamil *poussari*, Muslim *miadee*, Buddhist sisters, Christian priests, ministers, charismatic groups, healing churches, and a healing shrine dedicated to the missionary, Saint Laval.

In general, religious specialists deal with those classes of illness believed to be caused by spirits, offended saints and sorcery. However, they vary in their abilities to diagnose and treat particular classes of illness (see Table 1). For example, Hindu *maraz*, through divinatory techniques, are able to diagnose the type of illness (i.e. a 'natural' illness of God, an illness from sorcery, dead souls or offended saints), but they will usually treat only those ailments caused by dead souls and offended saints. Patients with the other classes of illness are referred to appropriate types of healers (usually physicians, herbalists, *poussari*, and sorcerers). On the other hand, Christian clergymen usually do not diagnose the causes of illness at all, but rather call upon the power of God, through prayer, benediction, the laying on of hands, or exorcism, to heal the patient of whatever ailment he has.

Some religious specialists may be consulted free of charge. Others may ask for a contribution or small fee for divination or the performance of a service or ritual. The cost of items required for services varies

greatly and may range anywhere from \$1.00-2.00 for items such as candles, incense, coconuts and bananas to \$75.00 for chickens, goats, rum and a variety of other items.

If an individual decides to consult a religious specialist, he will in most cases initially choose one from his own religious group. However, I have found that Tamil and Chinese patients whose families have converted to Catholicism may tend to consult specialists of their own ethnic group, Tamil *poussari* or Buddhist sisters, rather than a Roman Catholic priest. Moreover, the religious and ethnic backgrounds of patients of Tamil *poussari* tend to be more varied than those of the other religious specialists. This is because Tamil *poussari* hold a somewhat ambiguous status: Tamils see them as religious specialists, whereas many non-Tamils place them in the category of 'sorcerer', or *traiteur*. *Poussari* are believed to be able to diagnose all categories of illness and treat all those that are deemed to be of 'unnatural' origin, whether they are caused by dead souls, saints or sorcery. Treatment often involves devotion to one of the Tamil saints in order to gain protection. The powers and abilities of *poussari* overlap extensively with those of sorcerers. Therefore, non-Tamils may elect to consult a *poussari* instead of one of those practitioners I classify here as 'sorcerers'.

There is one other religiously-based healing resource on Mauritius that also appears to be utilized by a wide variety of ethnic and religious groups, and it is one that is viewed by the population as one of those rare institutions that is truly 'Mauritian'. It is the healing shrine dedicated to Saint Laval. Père Laval was a Catholic missionary priest who worked in Mauritius in the 19th century. He is known for the numerous healing "miracles" he performed and for his acceptance of and generosity towards the poor members of all ethnic and religious groups. Mauritians of all faiths have for many decades been making pilgrimages to the tomb of Père Laval in search of cures. Père Laval was sainted by the Pope last year which was cause for great celebration in Mauritius. A special mass was held in the capital city in which members of all of the religious groups participated, giving substance to the slogan associated with Père Laval and upon which the title of this paper is based: 'Unity in diversity'.

Sorcerers (traiteur, longaniste, doktere locale)

Sorcerers are represented by members of all ethnic and religious groups and both sexes. They may practice full-time or part-time and, from my observations of four sorcerers (a Hindu, a Tamil and 2 Catholic Creoles), I would estimate that they treat from 2 to 20 patients per day. The fees of sorcerers seem to vary considerably from one to the next and also vary according to the severity of the ailment and nature of the required treatment. While the fees for diagnosis and treatment may not be excessive, the cost of items needed for services and offerings can be quite high and could range from \$10-100.

In general, sorcerers are extremely individualistic in their practices and the majority are quite secretive about their treatment procedures and training. This may be because many of them presumably engage in destructive practices as well as constructive, healing

activities. They do not possess a shared body of cosmological beliefs and healing practices. Moreover, I generally find a lack of unity within the system of beliefs held by any one practitioner. Each seems to be influenced largely by the beliefs of his own religious group concerning the specific forces of Good and Evil that exist. However, my impression is that most have acquired their knowledge from several different sources and ideological traditions. These may include: old European sorcery and alchemy, early Freemasonry, Hindu, Tamil and folk Indian beliefs, Mauritian herbalism and folk beliefs and Christian beliefs and practices.

In general, knowledge and techniques may be transmitted within families, learned through apprenticeships with other sorcerers, learned from books, or acquired through direct communication with a higher power—or by any combination of these. Several sorcerers claim that they learned their trade from either 'Africans' or Malagasy, both of whom are regarded by Mauritians as being extremely knowledgeable and powerful.

Diagnosis may be performed by reading cards, reading palms, going into trances, invoking spirits at cemeteries, or clairvoyant powers with which one was born or which one has acquired as a result of devotion to a particular saint. Some sorcerers utilize several different methods depending upon the nature of the problem and its severity.

Treatment procedures include: herbal remedies, with or without accompanying incantations and rituals, to cure physical ills, break spells, and to cure cases of poisoning with magical substances; passes to exorcise evil spirits or magical weapons; services to saints either to propitiate them or to ask for their aid and protection against sorcery; prayers and services to spirits in cemeteries to break spells and exorcise evil spirits; and the preparation of talismans to break spells and give protection.

Patients of sorcerers consist of all of the ethnic, religious and socioeconomic groups without exception. Sorcerers are usually not a first resort in times of illness, except for a few well-defined clusters of symptoms, and are usually consulted after a number of other resources have been exhausted. They are also consulted for a wide variety of other misfortunes and social problems, most of which are related to work, school, family or marriage. They may be called on to remedy an already existing situation or to protect the client against misfortune.

In general, sorcerers state that they are able to diagnose all categories of illness, but most will treat only those that are caused by dead souls and sorcery. The symptoms of illness are, in most cases, not directly related to particular causal agents, and supernatural agents may cause 'natural' syndromes that are recognized and treatable by physical therapies. In such cases, however, the causal agent must be removed by the sorcerer in order to effect a complete cure and prevent the occurrence of future related ailments. Therefore, any longterm illnesses that do not respond to purely physical treatment are candidates for diagnoses of supernatural causes. However, some symptoms are usually consistently believed to be of supernatural origin. Sudden loss of consciousness and paralysis are usually associated with attacks by dead

souls, and bouts of aggressive, abusive, and illogical behavior are generally believed to result from sorcery, possession, or poisoning. Psychological, psychosomatic and chronic ailments seem to be among those most frequently treated by sorcerers.

CONCEPTS OF ILLNESS CAUSATION

A wide variety of healing resources are available on Mauritius, many of which are associated with particular ethnic and/or religious traditions. Moreover, most practitioners, except for a few of the religious specialists, are consulted by individuals of diverse ethnic and religious backgrounds.

Mauritius presents us with a situation somewhat different from that found in many of the African societies reported on during this conference. The therapeutic system on Mauritius is composed of a wider array of diverse healing traditions, some of which have been introduced to the island and others that have presumably developed on Mauritius through a blending of accessible traditions and knowledge. Moreover, the population is religiously and ethnically heterogeneous. In this pluralistic context, the question of how multiple therapeutic alternatives are accepted is not, as it is in many African societies, "how has the traditional medical belief system accommodated the newly introduced biomedical system," but rather:

(a) is there a single or dominant system of beliefs in Mauritius concerning health and illness or are there several ethnically or religiously based systems of belief? and

(b) how does the system(s) of thought about health and illness allow for or promote the maintenance of medical pluralism? How has it allowed Mauritians to accept new healing traditions and how does it guide their behavior when they are faced with illness? Is there, in fact, any unity in this sea of diversity?

Lay concepts and categories of illness

The classifications of illness that have been described to me by lay individuals have been strikingly uniform, regardless of ethnic and religious differences. This indicates that there is, indeed, a system of beliefs about the causes and classes of illness that is shared by a substantial proportion of the lay population of Mauritius.

The categories of illness are constructed according to general cause and consist of:

- (a) illnesses of God, or 'doctor illnesses';
- (b) illnesses from dead souls, or fright; and
- (c) illnesses of Evil, illnesses of people, or sorcery.

Seventy-five per cent of the Hindus questioned included an additional illness category: 'illnesses of saints'.

Illnesses of God (Malade Bondieu, Malade Doktere) consist of 'natural' or 'normal' illnesses that may be caused by a variety of factors including diet, weather, germs, stress and weak constitutions. They are cured or treated mainly by physical means (i.e. biomedicine, herbs, acupuncture, marking and passes). All individuals questioned stated that it is normal for people to become ill occasionally and that, in fact, it would be

peculiar if an individual were never ill. Illnesses of God are phenomena that exist and are part of the natural order of the universe as God created it. Some such illnesses are life-threatening or incurable. For these cases, one must pray to God and beg for his blessing. However, if it is His will or your destiny that you die or live in constant pain, you must accept it.

Illnesses of dead souls or fright (Mauvaise Air, Gayn Pere) result from encounters with the souls of individuals who have died before their time—usually from accidents or violence. It is believed by members of all religious groups that the souls of such individuals remain on earth, wandering about mainly after dark, until the time comes when they were supposed to die and God collects them from Earth. Some of the souls are wicked and may possess individuals, thereby producing behavioral changes or illness. Others do not have evil intentions. However, individuals become 'frightened' or 'shocked' upon encountering them and may lose consciousness, become paralyzed, or become feverish and delirious. The treatment for this type of illness usually consists of passes, prayers and exorcism and may be performed by religious specialists and sorcerers. Mauritians utilize a number of devices to protect themselves against *mauvaise air*: they may hang various charms in their homes, plant particular species of plant around the yard, and turn around and enter the house back first after dark.

Illnesses of Evil, or illnesses of people (Malade Méanseté, Malade Dimun, Gayn Diab) result from sorcery in which individuals, with the help of the various powers of Evil (the Devil, evil spirits or demons, and, in some cases, saints such as Kali) make someone ill or insane. They may also result from ingesting substances with poisonous and/or magical properties. In addition, it is possible to catch an illness of this type by disturbing spirits that reside in some large species of tree or by inadvertently walking over herbs that have been used by others to break spells.

Any illness that has not responded to treatment for 'illnesses of God' may be suspected to be an 'illness of Evil', regardless of the symptoms. While the belief in the existence of Evil is widespread and deeply rooted, most laymen have very limited knowledge about the powers that can be harnessed and utilized to harm people. Detailed knowledge about them is possessed only by specialists—religious practitioners and sorcerers, and only they have the ability necessary to gain contact with the invisible but powerful world of Evil and the power and skills necessary to neutralize or defeat it.

Illnesses of saints (Malade Saint) may result when an individual has not fulfilled a promise he has made to a saint. For example, in times of distress or illness, an individual may pray to Hindu or Tamil saints and promise to participate in firewalking, *Cavadee*, a pilgrimage, or other rituals of thanks if his requests are granted. If he does not fulfill the promise the saint may become displeased and harm him in some way. Individuals who break *karem* (purification observances required of participants in certain ceremonies and rituals), either knowingly or inadvertently, may also be punished and made ill by offended saints. Indian religious specialists (*maraz* or *poussari*) must be consulted for such cases and will usually prescribe

the performance of a special service to propitiate the offended saint.

Articulation of lay beliefs and the therapeutic traditions

All of the practitioners interviewed, except for biomedical physicians, homeopaths and Chinese doctors, gave classifications of illness that were essentially identical with those of the lay population. Biomedical, homeopathic, and Chinese practitioners differed from the lay population mainly because the therapeutic traditions they follow recognize only one category of illness, 'illnesses of God'. The major difference between the categories of laymen and the other specialists lies in the degree of detail in which the causes of some categories are known and subclassified. Each practitioner is capable of diagnosing and treating some categories of illness (see Table 1) and, as would be expected, has more specific knowledge about the class(es) of illness that he treats. However, his acquaintance with other categories of illness and with the ideological systems of other types of healing practitioners may not extend beyond that of the layman and may, in some cases, be more limited because of a lack of acceptance of the validity of particular traditions.

There is disagreement among the therapeutic traditions concerning the agents which may cause illness and the effectiveness of various treatment procedures. For example, biomedical physicians, Chinese doctors and herbalists may each prescribe different treatments for the same ailment. Likewise, a *poussari*, *maraz*, *traite-re*, and Catholic priest may utilize different techniques to rid a possessed patient of a spirit. However, the lay population holds such generalized notions about the multiplicity of causes and treatments of illness that their beliefs can articulate with the belief systems of all of the practitioners. Most Mauritians believe that each tradition possesses at least some elements of truth and are, thus, not constrained to adhere to one tradition or another.

Moreover, since Mauritians believe that illness may be caused by many factors, and since no one therapeutic system is capable of dealing with all of these factors, the system of beliefs not only accommodates medical pluralism but promotes its maintenance. There must be available at least one healing tradition that is able to treat each cause of illness. From the Mauritian point of view, the more traditions there are from which to choose, the better are the chances of cure since it is unlikely that the knowledge possessed by any single tradition is complete. Since each tradition possesses at least a few grains of truth, some may be more capable of curing a particular ailment or of dealing with a specific causal agent than another. For example, a patient may find that one type of treatment for an 'illness of God' is better than another: acupuncture may relieve his sinusitis better than medication from a biomedical physician. Likewise, a sorcerer of Tamil origin may be more effective at diagnosing and treating an illness caused by a Tamil saint than a Christian sorcerer who may not believe in the powers or even the existence of the saint.

In general, then, while each healing tradition may possess a rich body of knowledge about the nature and treatment of some causes of illness, they may

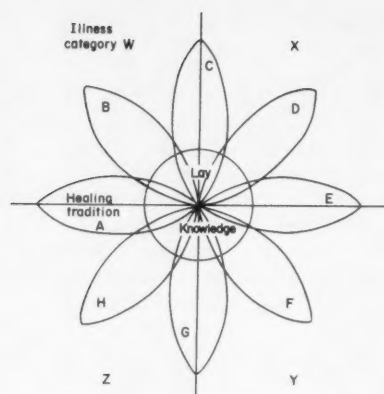


Fig. 1. Schematic representation of the distribution of medical knowledge on Mauritius. Lay knowledge is bounded by the inner circle; the knowledge of each healing tradition is bounded by one of the petals of the flower; each quadrant signifies a category of illness.

have little or no knowledge about other sets of factors that may cause illness. The lay population, on the other hand, lacks detailed knowledge about specific causes and treatment of illness but possesses generalized knowledge about the multiplicity of factors that may lead to illness. This is schematically illustrated in Fig. 1. The total medical system—or sum of knowledge about illness and healing—may be roughly represented by a flower. The lay system of thought and knowledge is bounded by the small inner circle and overlaps to some extent with all of the therapeutic traditions, each of which is bounded by a petal of the flower. Each of the four quadrants signifies a general category of illness. Thus, while the extent of the layman's knowledge about illness is limited, the structure of the medical belief system and distribution of medi-

cal knowledge is such that it allows for and, in fact, requires the maintenance of diverse healing traditions. It enables and encourages patients to exploit numerous sources of medical expertise, thereby expanding the scope of knowledge that is available to cure their illnesses. Their healing resources are thus theoretically bounded only by the total area of the flower, or the total medical system itself.

BEHAVIOR DURING ILLNESS EPISODES

Given that at a conceptual level, the medical belief system of lay Mauritians may potentially articulate with and encourage the use of all of the therapeutic traditions on the island, it is now necessary to examine how medical plurality is, in fact, supported and maintained at the behavioral level. What is the pattern in which patients utilize practitioners, and what is the structure of the decision-making process? The following discussion is derived from data on 279 illness episodes experienced during the research project by members of the 32 households under study (Table 2) and from data collected from patients of practitioners concerning the illness episode for which treatment was being sought.

The data suggest that there is a pattern to the way in which patients exploit the healing resources available. It can be seen in Table 2, for example, that in 260 of the 279 illness episodes (93%), initial treatment was sought from practitioners who treat 'illnesses of God'. Courses of non-treatment were followed in 16 of the episodes, suggesting that these ailments were also classified by the patients as 'illnesses of God'. The majority of patients in the southwest chose to utilize the government dispensary, which is conveniently located and free of charge, as a first resort. Although this choice may have been largely determined by economic and logistic restrictions faced by the par-

Table 2. Number of illness episodes for which study families consulted each type of healing resource at each level of resort

Healing resource	Illness episodes			
	First resort	Second resort	Third resort	Fourth resort
Government medical services	168 (0.60)	17 (0.28)	11 (0.39)	3 (0.21)
Private biomedical practitioners	21 (0.08)	15 (0.25)	3 (0.11)	2 (0.14)
Medicines bought at pharmacy or general store	47 (0.17)	7 (0.11)	2 (0.07)	0 (0)
Folk herbalists/home herbal remedies	20 (0.07)	7 (0.11)	1 (0.04)	2 (0.14)
Specialized secular healers	4 (0.01)	4 (0.07)	2 (0.07)	2 (0.14)
Religious specialists	1 (0)	2 (0.03)	2 (0.07)	3 (0.21)
Sorcerers	2 (0.01)	3 (0.05)	2 (0.07)	1 (0.07)
No treatment	16 (0.06)	6 (0.10)	5 (0.18)	1 (0.07)
TOTAL	279	61	28	14

ticular patients, the data collected on patients of practitioners give evidence supporting the idea that biomedical treatment, in one form or another, is usually a treatment of first resort and that most illnesses are initially classified by patients as 'illnesses of God'.

Specialized secular healers, sorcerers, and religious specialists are usually utilized as first resorts only for ailments involving specific sets of symptoms. The patients in the southwest consulted specialized secular healers for *tambave* and *fraisere*, sorcerers for sudden loss of consciousness and sudden paralysis, and religious specialists—in this case, a *maraz*—for an encounter with a dead soul and the subsequent sudden onset of fever and delirium.

In the majority of cases, the patient is satisfied with the results of the first treatment utilized and ends his quest for cure at this point. However, a considerable proportion of illness episodes are not satisfactorily treated by the first therapeutic resource consulted and the patient continues his quest for cure. This occurred in 22% of the illness episodes presented in Table 2. For 56 of the 61 episodes (92%), patients classified their ailments as 'illnesses of God' and chose to consult an appropriate practitioner or to embark upon a course of home treatment or non-treatment. Therefore, most of the cases in Table 2 involved a switch from one biomedical resource (the government system) to another (a private resource). The switching of practitioners within the same ideological tradition seems to be a common occurrence at the second level of resort.

Patients may, however, also switch to a practitioner of another healing tradition that deals with the same general category of illness as the first one used. This is seen by the higher frequency of use of herbal remedies and specialized secular healers as second resorts than as initial ones. Patients living in urban areas or possessing greater economic resources than the sample represented here may switch from biomedicine to alternative physical therapies such as acupuncture or homeopathy. In general, switches of this type are usually made by patients with specific types of ailments. It appears as if particular therapeutic traditions are being utilized for limited sets of symptoms. Each is thus gaining a reputation for possessing expertise in the treatment of particular illnesses and is consulted by patients, usually as second or subsequent resorts, for such ailments.

A small proportion of patients at this point in their quests for cure change their original tentative categorization of their illness. This usually involves the reclassification of the illness from 'illness of God' to 'illnesses of Evil,' 'saints,' or 'dead souls'. This is illustrated by the higher frequency of use of religious specialists and sorcerers as second resorts than as first resorts. The five cases in Table 2 for which religious specialists or sorcerers were consulted as second resorts represent instances in which such reclassification occurred. Reclassifications, however, are not necessarily made in this direction and may be from one category to any other. For example, the patient who was initially brought to a sorcerer for suddenly losing consciousness was subsequently brought to a biomedical physician, indicating a reclassification of the illness from 'sorcery' to 'illness of God'.

In very few cases (approximately 10% of the original 279) are more than two practitioners consulted. However, in those cases where the quest for cure continues and additional practitioners are consulted, the pattern of utilization appears to become more randomized or evenly distributed among resources. There is an increasing tendency for patients to consult religious specialists and sorcerers. Moreover, the nature of the symptoms for which these types of practitioners are consulted appears to change at the point of third resort. Whereas religious specialists and sorcerers were consulted as first or second resorts mainly for cases of paralysis, loss of consciousness, and psychological disorders, they were consulted by patients in the southwest as third and subsequent resorts for a variety of chronic ailments. The cases included in the table consisted of chronic heart palpitations and weakness, earache, stomach pains, skin disease, gout and stomach ulcers, bronchitis and congenital heart disorders.

Figure 2 is a schematic representation of the quest for cure, including the points at which decisions must be made, the options available, and the factors influencing those decisions. First, an individual experiences bodily or mental states or exhibits behaviors that are perceived by him or family members to denote a state of illness. The patient and/or his family and/or friends will then tentatively place the ailment into an illness category and, in some cases, may assign a specific diagnostic label to the ailment (e.g. rheumatism, *tambave*). The ease with which this first decision is made depends largely upon the nature of the ailment and mainly upon its novelty and severity. Factors which may influence the decision include: the medical history of the patient, available knowledge about the possible causes and categories of illness, and knowledge and past experiences of family and friends.

The next step is to decide upon the action which is to be taken—the appropriate therapeutic resource to be consulted or treatment to be followed. The options theoretically may include all of the types of treatment appropriate for the illness, including home treatment and no treatment. In practice, however, they are limited by:

- (a) the extent of knowledge held by the patient, family and friends concerning home remedies and the range of healing resources existing on Mauritius;
- (b) the economic resources available to the patient;
- (c) the geographical location of the patient and of the various appropriate practitioners;
- (d) in some cases, the religious preferences of the patient and his corresponding attitude towards particular healing resources; and
- (e) the past experience, knowledge, and attitudes of the patient, family, and friends concerning the effectiveness of particular healing traditions or specific practitioners for similar types of ailment.

Once the type of healing resource has been decided upon, it is necessary to choose a specific practitioner within the chosen therapeutic tradition. The factors which influence this decision are the same as those influencing the decision concerning the appropriate healing tradition to consult.

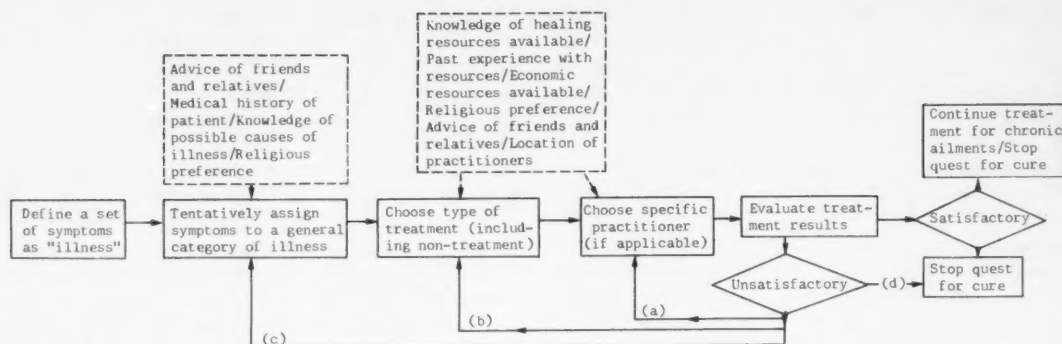


Fig. 2. Diagrammatic representation of the structure of the decision-making process during quests for cure.

After one has embarked upon a treatment, the patient, after a variable amount of time has passed, evaluates the results of the treatment. The evaluation process may be quite complex. A discussion of the variables that influence the length of time which is allowed to pass before the effectiveness of the treatment is judged and the criteria that are used to judge effectiveness is beyond the scope of this paper. In short, however, the goal of treatment is usually the timely disappearance or, in some cases, the temporary relief, control or decrease in the intensity or frequency of symptoms. Effectiveness is thus usually judged in these terms.

If the patient deems that the results of the chosen treatment are satisfactory, he then assumes that the category to which he tentatively assigned his illness, the therapeutic system and the specific practitioner were correctly chosen. He will, depending upon the nature of the ailment, either stop treatment when he is cured and thus end his quest for cure or continue the same treatment if he has an ailment that he is willing to accept is chronic and incurable, thus ending his quest for cure but continuing treatment to relieve or control his symptoms.

If, on the other hand, the patient concludes, for one reason or another, that the results of the treatment are not satisfactory, he must decide why this is so and what he should do next. He has basically four options:

- (a) the specific practitioner he consulted was not skilled or powerful enough to produce a satisfactory cure;
- (b) the therapeutic tradition chosen cannot effectively treat the illness;
- (c) his initial tentative 'diagnosis'—or assignment of the illness to a particular category—was incorrect; or
- (d) regardless of why the treatment was ineffective, he decides to give up his quest for cure.

Factors which may lead him to the latter decision are mainly either the lack of severe or frequent symptoms or a belief that God wills him, or it is his destiny, to be ill. If he decides upon the first alternative, he will locate and consult another practitioner within the same therapeutic tradition as the first (e.g. if he initially consulted a biomedical practitioner, he will now choose to consult another one). Since there is

believed to be wide variation in the skills and knowledge of individual practitioners within a single healing tradition, individuals may consult numerous practitioners within each tradition in the hope of finding one who possesses the required skill and/or power to effect a cure. If he chooses the second alternative, he will choose a different therapeutic system that deals with the same category of illness (e.g. he may move from a biomedical physician to an herbalist). If he chooses the third option, he will tentatively reclassify the illness, assigning it to one of the other two or three illness categories available, and then follow the successive steps once again of choosing a therapeutic system and a practitioner. In all three cases, the patient will again evaluate the treatment results and decide either to end his quest for cure (path d) or to continue it by re-entering the loop in Fig. 1. He may re-assign the illness to another category (path c), choose a different therapeutic system (path b), or choose a different practitioner within the same system (path a).

It should be noted here that various factors, such as the depletion of economic resources, the lack of knowledge of any other healing resources to consult, the lack of any other nearby healing resource, and the lack of debilitating symptoms, may lead to a temporary suspension of the quest for cure. The quest, however, will continue when the particular limitation is lifted.

The number of practitioners consulted in search of a cure depends upon the nature of the ailment, the motivation of the patient and his family, his role in the family, as well as on the economic resources available to him. Most ailments are either minor, easily cured or self-limiting and usually involve the consultation of one or, at most, two practitioners. The quest for cure is, therefore, usually prolonged only for a small proportion of cases largely consisting of chronic, severe, and psychological or psychosomatic disorders. Economic factors may also be extremely important in determining the number of practitioners consulted. For example, patients of low socioeconomic status almost invariably will try to find cures through resources that are free of charge or inexpensive and within easy reach of their homes. They are, thus, restricted in the types and hence, number of resources they may utilize. Theoretically, however, the number of options both within and between healing

traditions is so great that the quest could continue for long periods of time and involve the consultation of a great number of diverse healing resources.

One last aspect of the decision-making process in the search for cure needs to be discussed. Figure 2 represents the quest for cure for a particular illness episode. However, over a lifetime, an individual and his family and friends will experience numerous episodes of illness. What, then, are the effects of previous illness episodes on the range of therapeutic options available for future episodes of illness? Besides the possible positive effects of expanding the individual's knowledge about particular illnesses and about the existence of therapeutic systems and practitioners, might they not have some negative effects insofar as the maintenance of medical pluralism and of multiple options is concerned? In short, if a patient had consulted several practitioners of a particular healing tradition and was not cured of a previous illness, will this not lead him to lose confidence in the overall value of that healing tradition?

The answer is usually, no, it does not. For Mauritians, positive treatment results definitely confirm diagnoses. After having found a cure, the patient, therefore, assumes that the practitioner who cured him was able to do so because he diagnosed the cause of the illness correctly, the healing tradition could effectively cure this type of ailment, and the healer was sufficiently skilled to prescribe or carry out the correct treatment. The patient then is in a position to explain the failure of other treatments and practitioners and may choose one of the following explanations: the individual healers were not skilful or powerful enough to cure him; or the healing traditions were not effective against the specific ailment he had although they may be effective against other categories or subcategories of illness. Therefore, the explanations are usually related only to the effectiveness of the healing traditions for the particular illness episode in question.

Of course, if the patient experiences a subsequent illness that he believes is similar to a previous one, he may not seek treatment from healing traditions that failed to produce a cure for the prior illness. However, he will consider using them for ailments that he believes are different. Patients may, on the other hand, exclude certain individual practitioners from their lists of options. If, for example, one biomedical physician cured an illness that another could not cure, the patient will tend to seek the advice of the more skilful physician for future ailments that require biomedical treatment.

One factor that appears to be essential in allowing the various traditions to be maintained as therapeutic options throughout the lifetime of an individual is that the process of diagnosis, by whatever means it is accomplished—symptoms, physical examination, laboratory analyses, card reading, clairvoyance, or divination—be believed to be fallible and yielding only tentative results. For Mauritians, if the healer is skilled in his profession, negative results often indicate that the diagnosis is incorrect. Therefore, if the validity of healing traditions were judged by the infallibility of their diagnostic procedures, the traditions would be discredited much of the time that they failed to produce satisfactory results. The fact that a practi-

tioner has made an incorrect diagnosis, however, does not necessarily lead the Mauritian patient to lose confidence in him or the healing tradition.

This is a logical and necessary component of the medical belief system since Mauritians believe that illness may be caused by a multiplicity of agents all of which no single healing tradition is equipped to treat. For example, a biomedical physician cannot possibly be expected to diagnose and cure a case of sorcery because it is outside his realm of competence and outside the realm of his diagnostic categories. One case illustrates this point well. A young Creole woman periodically experienced bouts of illogical, aggressive and abusive behavior. Her behavior became so violent and uncontrolled during one bout that she broke her own arm while thrashing about the room. She consulted physicians and several Creole sorcerers but was not cured until she finally consulted a Tamil *poussari*. The *poussari* told her that she had been cursed and was possessed by a Tamil spirit. This then offered her an explanation as to why the physicians and Christian sorcerers had been unsuccessful in ridding her of her ailment. The illness simply was not amenable to diagnosis or treatment by these practitioners because it was outside their realm of expertise and knowledge. She believes that if she had had an illness that they had been adept in curing, they would have cured her.

It is, thus, recognized that each tradition is able to diagnose and cure only a limited set of ailments. The others are outside the scope of knowledge of that tradition: they belong to another petal of the flower of medical knowledge (Fig. 1). It is, therefore, the task of the patient, whose knowledge lies in the center of the flower and overlaps to a limited extent with the multiplicity of healing traditions, to choose to tap the resources of the correct petal.

DISCUSSION

An investigation of the concepts of illness held by Mauritians and of the way in which the conceptual system guides behavior during illness episodes has led to the conclusion that there is, in fact, unity in the diversity found on Mauritius. The medical belief and classificatory system provides a unified framework in which patients structure both their perceptions of illness and their utilization of the various therapeutic resources available. The structure of the decision-making process during illness episodes is such that it allows patients to consult a variety of healing traditions for particular illness episodes and to utilize over their lifetimes the full range of healing resources available. Patients may switch healing traditions without ideological conflict because all of the traditions are accommodated by the multicausal belief system. This supports Last's [7] contention that in plural medical systems the use of different healing resources does not necessarily involve the 'switching of codes' nor does it consist of choosing between equally effective 'alternatives'. Rather, it involves the choosing of the therapeutic resource 'appropriate' for the ailment and all of the resources are contained within a single conceptual framework.

In addition, not only does the medical belief system tolerate diversity, but it promotes and requires its

maintenance. Illnesses are divided into several categories, each of which is based upon sets of causes. Each type of practitioner is capable of dealing with particular causal agents. Since no single healing tradition possesses the knowledge, skills and powers necessary to diagnose and treat all of the potential illness-producing agents, it is essential that several different healing traditions be exploitable by the patient. Consequently, the quest for cure must be constructed to allow for the potential exploitation of multiple resources during each illness episode throughout one's lifetime.

Mauritius presents us with a medical system that has developed in a heterogeneous, multiethnic society. Mauritius is an island of great cultural diversity and has been subject to considerable change in the structure of its population. During its early history, in the 18th century, the population was already heterogeneous, consisting of French planters and slaves of East and West African, Malagasy and even Indian origin. The population has become increasingly heterogeneous since then and during the past 250 years the peoples of Mauritius appear to have followed a pattern of adjusting to the presence and tolerating the beliefs of each new immigrant group.

The relationship between the groups has largely been one of tolerance and peaceful coexistence rather than one of blending to form an identity that could be called 'Mauritian'. Informal social networks are usually formed along ethnic and religious lines and intermarriage between groups is discouraged. At the same time, most groups may be characterized by their tolerance of other peoples' belief systems and by their general view that each cultural tradition must possess some knowledge that is of value. Beals finds a similar point of view among Indians in Mysore State: "The presence of plural medical philosophies is a reflection of a generally pluralized conception of the Universe. There are many gods, many roads to Heaven, many scriptures, many intellectual traditions, and many kinds of peoples.... It is not for the ordinary man to attempt to reconcile diversity..." [8]. This attitude is reflected in the medical beliefs and practices presently found on Mauritius.

A single, consistent system of medical beliefs appears to have developed on Mauritius which is well adapted to the social history of the island. It is a system that promotes the maintenance of ideologically diverse healing traditions and the acceptance of newly developed or newly introduced therapeutic resources. As Last [7] suggests, it is a system in which patients place more emphasis upon the therapeutic effectiveness of the traditions than upon the ideological differences among them.

While the foregoing discussion has emphasized the openness of the medical system and may have represented it as somewhat static, I must state here that it is not one that is characterized by non-discriminating acceptance of all healing practices, nor are the relationships among the healing traditions static. A number of changes have occurred in the patterns of utilization of some of the healing resources, many of which are at least partially based upon the layman's demand for therapeutic effectiveness and convenience. One of these is the general decrease in the use of plant remedies. While the use of such remedies as a first

resort for illness is still quite prevalent, the younger generation tends to utilize them less frequently than their elders and knowledge about medicinal plants is rapidly being lost among the lay population. Among residents in the southwest, for example, I have found a mean loss of 38% of knowledge from mothers to daughters, with a range from 0 to 82%. Moreover, herbalists and Chinese pharmacists have noted a decrease in their volume of business in the past decade or two and, as noted above, a local, Creole herbalist tradition may have disappeared in the recent past.

It seems that there has been a competitive relationship among several of the healing traditions that are appropriate for illnesses of God. This may have led to the exclusion of a professional Creole herbalist tradition. It now, however, appears to be tending towards a relationship of compartmentalization among the biomedical, homeopathic, Chinese, Tamil herbalist and lay herbalist traditions. Biomedical resources are being utilized as first resorts for a wide variety of ailments. Although the other traditions claim competence in treating a wide range of illnesses, they tend to be utilized as second resorts and mainly for specific types of ailments.

As discussed above, a variety of factors influence patients' decisions concerning choice of therapeutic resource. Among those that appear to be leading to a relationship of compartmentalization are:

(a) the widespread distribution of biomedical resources on the island as opposed to the localized concentration of the other resources;

(b) the availability of free biomedical care;

(c) the relative convenience of biomedical forms of treatment, such as tablets and injections, as opposed to the inconvenience of herbal remedies which must be prepared and, in some cases, contain rare plant species that are becoming increasingly difficult to find; and

(d) the legal status accorded to biomedicine and the inability of other types of practitioners to issue sick leave, birth and death certificates and to utilize diagnostic services available at the hospitals.

The extent to which a decline in business can be economically withstood by the non-biomedical practitioners is not known and the outcome of this compartmentalization process is as yet unclear. It should be noted here that the specialized secular healers have not been affected by these changes because presumably they have always specialized in the treatment of a specific set of ailments and, hence, have always held a compartmentalized, clearly defined, but limited, role in the treatment of illnesses of God.

While this trend away from the general use of herbal therapeutic traditions may at first appear to suggest a move towards the rejection of 'traditional' beliefs and practices and an acceptance of Western standards and ideas, this does not seem to be the case. Rather, it seems to represent simply a process in which the 'appropriate' domains of each therapeutic tradition are being sorted out and reassigned largely as a result of changes in the availability of biomedical resources in the past few decades. This view is supported by reports from sorcerers that their volume of business is not decreasing and that their clients consist of all socioeconomic and age groups.

The healing role of sorcerers seems to have been compartmentalized for quite some time and the services of sorcerers today are usually sought for long-term psychological and psychosomatic ailments. While such ailments may represent only a very small proportion of the illnesses experienced by the population and an increasing number of these are being handled by the relatively recently introduced psychiatric out-patient facilities, sorcerers have not noted a decline in their total number of clients. This is probably the case because these practitioners are also being consulted for a class of problem that is not being dealt with by other healing or counseling resources: social problems involving family, marriage, employment and education. Therefore, sorcerers are in a position similar to that of the specialized secular healers whose existence is not currently threatened through competition with other resources. Their roles are compartmentalized and the domain of their expertise includes some exclusive areas that are not included in that of any other practitioners. There is, however, competition among sorcerers themselves.

Since they do not possess a shared body of beliefs and practices, each practitioner creates a mystique around himself and places great emphasis upon the unique and secret knowledge and power he possesses.

In this paper I have attempted to demonstrate how the medical belief system in a multiethnic society provides a unitary conceptual system that promotes the maintenance of several ideologically diverse therapeutic traditions. Medical systems are integral parts of the sociocultural systems in which they exist. They have developed within particular contexts and thus tend to be adapted to deal with the health needs of the population and are usually also intimately related to the world view and social values of the culture. A great deal of emphasis has been placed by anthropologists on the importance of communication between practitioners and patients [9-11]. "Traditional" practitioners and patients are generally described as sharing the same world view and holistic approach to health, thereby allowing for the assignment of diagnostic labels and treatment procedures that are usually more meaningful and complete than biomedical diagnoses and treatment.

The plural medical system on Mauritius is well adapted to the heterogeneous social context in which it exists. An investigation of the conceptual and behavioral components of this system, however, brings to mind the following questions concerning the characteristics of other medical systems and of their variation in different societies. To what extent must the world views of practitioners and patients overlap in order for the diagnosis and treatment to be meaningful and/or satisfactory from the patient's point of view? To what extent do patients seek understanding or explanations of their illnesses? How much emphasis is placed upon the understanding and acceptance of the ideological foundations of the therapeutic tradition as opposed to the effects of treatment? What relative importance is placed on the techniques and technologies of the healing traditions as compared to their ideological bases? In Mauritius, the world views, knowledge and ideology of the specialist and layman overlap only to a very limited extent. Patients tend to

place considerably more emphasis upon treatment results and techniques than upon the understanding of the cause of the illness and of the ideological foundations of the therapeutic techniques. To what extent does this correspond with other medical systems? Are these characteristics unique to plural medical systems in multiethnic societies? What effects, if any, do these have on the psychological and social dimensions of the healing process and are there qualitative differences between the structure and meaning of the healing process that correspond to degree of medical pluralism or degree of social heterogeneity? These questions require further detailed comparative research on the characteristics of medical systems in different sociocultural contexts.

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GODLY MEDICINE: THE AMBIGUITIES OF MEDICAL MISSION IN SOUTHEAST TANZANIA, 1900-1945

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Abstract—Recent historical writing has cast medical missions in Africa as handmaidens of colonialism. The present paper offers a revisionist medical history of one medical mission effort—that of the Universities Mission to Central Africa (U.M.C.A.)—which was explicitly opposed to colonial capitalism and such policies of industrial medicine as the coercion of laborers, but which shared with other missions a paternalistic civilizing mission and Christian evangelization. This combination of scientific rationality and Christian evangelicalism provide the basis for a 'theory' of mission medicine, in terms of which it can be asked whether, and to what extent, missions—here the U.M.C.A.—succeeded in their goals. A series of tests confront the Masasi U.M.C.A. medical position, to illustrate mission medical history, including: (1) the early colonial epidemics (1880-1926) which largely overwhelm mission medicine, with the exception of success in treating Yaws; (2) the role of the *jamaa* lay kin therapy managing group's interference with the mission's self-defined role in diagnosis and treatment; (3) the practice of alternative therapies within the African Christian community; (4) medical modernization and the formation of a cadre of African medical people; (5) initiation rites and efforts of mission personnel to improve circumcision hygienic conditions without disrupting the rites; (6) the challenge of spiritual healing and the rise of African prophetic healing. Although the U.M.C.A. is considered to have failed to maintain its objectives in each of these tests, and ultimately to have abandoned its early 'theories', it survives in Tanzania as a government-sanctioned presence with a role in contemporary rural health care, utilizing very different goals from those originally espoused.

INTRODUCTION

Once upon a time medical histories of colonial Africa were unashamedly triumphalist. They recounted the steady expansion of facilities; the heroic and successful fight against tropical disease. They saw medical provision as perhaps the one totally constructive and benevolent aspect of colonialism. And they saw the practical triumphs of Western medicine as the greatest force for conceptual change, compelling Africans to abandon their unscientific world view. More recent historians have cast a colder eye on the proclaimed aims and achievements of colonial medicine. Such historians have emphasized the very limited practical success of early colonial medical treatment. They have charted colonial epidemics; the ravages of the first world war; the rise of industrial diseases; the entrenchment of diseases of poverty and undernourishment. They have stressed the role of doctors as allies of colonial capitalism; the way in which sanitary theory was used to enforce urban segregation or to over-ride African property rights; the high-handed and often misconceived way in which rural populations were shifted and centralized in the name of the war against disease. With its combined aspects of coercion and inefficiency, colonial medicine had ambiguous ideological effects; perceiving it as a key element in white power, some Africans aspired to gain access to its forms; others accepted its rulings with resignation as an aspect of industrial discipline. But there was little prospect that the perceived triumph and benevolence of Western medicine would fatally erode African concepts of disease, treatment and causation [2-4].

In this revisionist medical history, the emphasis has shifted away from missionary medicine. As I myself wrote in a recent article:

We have been accustomed to thinking of medical provision for Africans in terms of the missionary doctor, selflessly itinerating the rural areas. In Rhodesia, at any rate, very many more African men encountered doctors at or on the way to their places of employment... They were scrutinized to protect the health of Europeans with whom they might come into contact; they were subjected to authoritarian restrictions and disruptions which reached their peak in times of epidemic or fear of epidemic; and all the time they were kept going as workers on medically advised minimum diets and 'running repairs' [5].

It is time, I think to turn back to missionary medicine. My purpose in this paper is to examine a missionary case in which many of the factors of coercion, subordination to the interests of industrial capitalism, and so on, are absent; in which the theory and practice of medicine were determinedly benevolent, even if paternalist. In such a case the high expectations of the missionaries that Western medical provision would produce profound ideological transformations can be usefully tested and examined. In the particular mission I have selected—the Universities Mission to Central Africa (U.M.C.A.) diocese of Masasi in south-east Tanzania—these conditions certainly existed. The U.M.C.A. was hostile to industrial capitalism and did its best to achieve a self-sustaining rural economy. It looked back to a doctor—David Livingstone—as its founder. It had an elaborate Christian theory of medicine and healing. Its clinics and hospitals provided, with those of the Catholics, the sole effective medical

facilities in Masasi district. Its second mission doctor, Leader Stirling, is at the time of writing Minister of Health in the Tanzanian Government; Julius Nyerere has described contemporary Tanzanian health policy as a continuation of the 'tradition' of rural health care established by the U.M.C.A. [6]. Here if anywhere one might expect to find a profound penetration of African conceptual systems by the ideas of Western medicine.

THE THEORY OF MISSION MEDICINE

There is no question of the central importance which the U.M.C.A. theorists ascribed to mission medical work. "One feels that the medical work is the one solid asset of the missionary work here," wrote G. H. Wilson; "Preaching in a tongue of which one has but an elementary knowledge is discouraging work. . . . But the care of the sick and afflicted without thought of reward or return bears witness to Christ as it did in Galilee long ago" [7].

There were broadly four claims made for medical work. The first and most important was that it carried on the work of Christ Himself. Christ did not, of course, employ the methods of nineteenth century medicine but it was assumed by nineteenth century bishops that doctors were the true successors of Christ the Healer. "How much of the influence of our Blessed Lord, while on earth," reflected Bishop Smythies of Zanzibar in 1892, "came through healing diseases" [8].

The second claim for medicine consisted precisely in its power to penetrate heathen and even Moslem societies which were resistant to evangelization. Smythies' definition of a medical missionary was "a doctor who uses all his medical knowledge for a missionary end, whose aim it is to use the great influence which his profession gives him to draw his patients to the love of God". In many parts of East Africa, Smythies thought, hostility to Christianity could only be overcome by "sympathy shown for the sufferings of the body . . . together with the power to alleviate them" [8].

But medicine was seen also as a weapon in a more direct and militant confrontation with heathenism. The asserted superior power of European medicine over African treatment of disease was held to demonstrate the validity of Western rational explanation over African superstition. While bishops thought in terms of the continuation of Christ's own ministry and of the penetrating power of sympathy, mission nurses thought more in terms of combat. Thus Mrs Williams described from Zanzibar in 1880 how she had begun to treat a child 'with a horrid skin disease':

I doctored it and the places were healing beautifully when I found that the child was wearing charms. I told (the mother) that I could do no more for it till they were removed. But it was no use; she refused to take them off, so I put the ointment away. . . . Eight months or so have passed since then, during which time the child has worn the charms and has been getting very much worse. Over and over again the mother has begged me to cure it. . . . It has been very hard to see the poor little thing growing worse and to hear its piercing screams when they put on native medicine, and yet do nothing to relieve it. Now, I am only too thankful I did not yield. . . . I told her once more that I could do nothing till she gave up the medicine of the devil.

Greatly to my surprise she cried "Give me a knife" and immediately cutting off the charms from her child's neck gave them to me. I joyfully went in and prepared the ointment. You will be glad to hear that the healing has been very rapid [9].

Masasi nurses produced nothing quite so formidable as this. But the same idea comes out of Miss Andrews' account in 1918:

All pain and illness are in African minds the direct action of evil spirits. The power of witchcraft is so great and so overwhelming. Sometimes the whole place throbs with the tom tom wherever one goes. Someone has fever and the devil is being drummed out. . . . Every attendance at the dispensary is a defiance of evil spirits [10].

Even Masasi African clergy fell into the same idiom. Daudi Machina described in 1910 "a kind of illness which is prevalent at Lulindi", the site of the mission hospital. People called this illness "possession by an evil spirit". Machina continued:

One man who was seized with it sent for an *Ngoma*, that is for a drumming and dancing to drive out the spirit and nearly all the town heard the noise of the *Ngoma* and everyone thought he was possessed by a devil, even the Christians. . . . (I said) "I don't believe that you are really ill; it is nonsense; a trick of evil spirits. Now every man who has been taken ill, let him be brought to the nurse at the dispensary and she will examine him and if it is not true she will know for she is a doctor and she will also know exactly what medicine to give him!" Well, since that day no one . . . has been possessed by an evil spirit. So the medicine for this illness is to name the lady who is a doctor! [11]

Machina told a woman who was wearing protective charms that he did not believe that Christians could be possessed. "Cut off your charms and I will send you to the nurse to get medicine" [11].

The fourth and final claim for mission medical work was that the hospital instilled time sense, work discipline, sobriety—those invaluable preconditions of rational thought and action. As Dr Howard wrote in 1914 of medical work in north east Tanzania:

I think there is nothing more striking than the marked difference there is in a patient when he has been with us for a few weeks. We are but human, and at times we admit a man or woman to whom we feel a distinct aversion. At the end of a week or two we forget that we ever had that feeling, the person who aroused it is now so improved, not only in health, but in tone and behaviour [12].

Such were the justifications and expectations of mission medical work. Up to 1945 at any rate none were fulfilled. I shall seek to show in this paper that mission medical provision with its scientific rationality was not experienced by Africans as a continuing part of Christ's ministry. They looked for spiritual healing and were not offered it by a church which had compartmentalized healing off into the hospital and the dispensary as a task only for nurses and doctors. Whatever sympathy was shown in Moslem areas by missionary medics no Christian penetration followed. Nor did African acceptance of the utility of mission medical treatment for certain diseases at all shake their overall belief in the tenets of indigenous philosophies of misfortune. Finally, Masasi hospitals never achieved before 1945 the sort of ordered discipline which Dr Howard expected to raise tone and behav-

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ious. By 1945, as we shall see, every one of these assumptions was being questioned and U.M.C.A. clergy and medics alike were calling for a new strategy of healing.

THE BELATED ARRIVAL OF MISSIONARY MEDICINE IN MASASI

U.M.C.A. medical work encountered the same problems of credibility everywhere, but they were compounded in Masasi by the fact that medical provision did not begin there until so late in the day. Hospitals and dispensaries were operating at the U.M.C.A. headquarters on Zanzibar 30 years before any were opened in Masasi. Medical workers were active in north east Tanzania and in Nyasaland a good decade before anything began in Masasi. The main reason for this was that U.M.C.A. medical provision was largely in the hands of women and Masasi was for long regarded as too dangerous a region for the dispatch of nurses. The Ngoni raids and the later resistance to German penetration deterred mission strategists on Zanzibar from deploying nurses there, and even when the colonial peace was imposed on the area the batchelor clergy of Masasi expressed resolute opposition to the arrival of women workers.

Prior to the coming of the first nurses in December 1903 medical work in Masasi had been confined to the rough and ready first aid efforts of the missionaries [13]. At Masasi station in January 1903 there were still no medical facilities save for a few simple drugs which the clergy doled out to meet the "occasional demand for physic" from one of their school-boys [14]. Medical work began at the second major station of Luatala with "a few bottles behind the dining room door," dispensed by Anderson, the station layman, "in the odd moments snatched from his other multifarious duties" [15].

In 1901 J. E. Hine became Bishop of Zanzibar. Hine had gone out to Nyasaland as a medical missionary and as bishop he continued to practise surgery and to dispense medicine, especially on Zanzibar but also while itinerating on the mainland. Hine was the first qualified doctor to treat Africans in Masasi, though he did so only in the intervals of hearing marriage cases and confirming candidates [16].

These occasional and peripatetic ministrations were plainly no substitute for permanent medical staff in Masasi. Hine began to take this in hand as soon as he was appointed bishop; as he travelled from lake Nyasa through Masasi on his way to Zanzibar he planned "an invasion of nurses" [17]. It took him two years to overcome the objections of the Masasi clergy and to recruit nurses and the ladies did not arrive until December 1903. Medical work had hardly begun when the Maji Maji rising swept into the south-east and all the white mission staff fled before it to the coast in August 1905. Nurses did not return until the end of 1907. The resumed medical work went slowly—"the people are not a bit keen on coming...and they are so shy," reported Nurse Dunn from Masasi in December 1909 [18]. The U.M.C.A. doctor in the north-east of Tanzania, Robert Howard, was certainly correct when he wrote of Masasi in 1913 that "the development of our medical work there is far behind what it is elsewhere" [19].

Then came the war and the internment of all the European staff by the Germans in February 1915. Mission nurses did not return to the district until March 1919 and dispensaries and hospitals effectively re-opened in 1920. It was really not until the appointment at long last of Frances Taylor as mission doctor for Masasi in 1926 that anything like regular and continuous medical work got under way.

DETERIORATION OF HEALTH IN MASASI, 1880-1926

We shall have occasion to notice several consequences of this delayed start, but one was of overriding importance. The theorists of medical mission assumed that Africans would greet the whites as emancipators from disease. The development of mission influence would coincide with gradual but marked improvements in health as a result of the successes of mission medicine. In Masasi mission medicine could hardly begin to make much of an impact before the 1920s. But by that time Africans had come to connect the dominance of the whites not with an improvement in health but rather with a grave deterioration. New diseases spread—some directly as a result of European incursion, some indirectly the result, some co-incidentally with it. Diet was impoverished; famine and death became structural features of the region; the war had a devastating impact. By the 1920s the articulators of indigenous systems of explanation in Masasi district were not faced with the problem of trying to explain away the successes of scientific European medicine. Instead they were faced with the problem of trying to come to terms with, to explain and to seek to control epidemic disease and sapping malnutrition.

Diseases which appear to have been introduced by the colonial incursion included many which had been the great child-killers of nineteenth century industrial Europe—measles and whooping cough in particular. Diseases which appear to have become more widespread as a result of the movement of people under colonialism—porters, labour migrants, troops, carriers—included small-pox, which had certainly been present in southern Tanzania but which gave rise to severe epidemics in the early decades of the twentieth century. Diseases which were prevalent in other parts of East Africa but which had not hitherto existed in south-east Tanzania were brought back there by migrant workers moving to and from the European plantations on the coast—the outstanding example of such 'industrial' diseases in Masasi district was hookworm, which was still quite rare in the mid-1920s but which had become a major threat to health by the second world war [20]. Diseases which arrived co-incidentally with colonialism—though no doubt also assisted in their movement by its widening of communications—included jiggers, the history of which was engagingly spelt out for child supporters of the U.M.C.A.:

Jiggers really have no business to be in Africa. Their real home is in the tropical part of South America, but as they burrow into people's feet they managed to get taken from South America to Jamaica. In Jamaica... there are ever so many descendants of the West African slaves, whom we took there in the bad old days. Naturally enough Africans

from Jamaica go to see their friends in West Africa and in their feet travels the jigger [21].

Thereafter the jigger flea travelled across Africa—"about the year 1900 it reached the East Coast" [21].

In addition to all this was deterioration of diet. The Masasi area had never been agriculturally rich. Cattle could not be kept there which deprived people of a key insurance against famine, and except for the dew-drenched Makonde plateau to the east, there was uncertain rainfall. However, there seems no doubt that things got worse under colonial rule, and especially as a result of the war. The relatively diverse economy, which had given some protection against crop failure, gave way under colonialism to a total reliance on cereal and cash crop cultivation. Demands for tax and the need for cash for clothes and utensils meant that people sold whatever surplus of grains they had at harvest time and had to buy grain back at inflated prices in the hunger months. Hunting became much less important as a supplement to the diet. During the war "the troops in their leisure hours ruthlessly destroyed game", and after it "the government... raised the price of a game licence to a fancy figure. No longer can one of our men go out and shoot an eland or a gazelle to vary our chicken menu" [22].

The war brought all this to a high point of suffering. The Germans interned the missionaries and commandeered their food stocks, which had in the past been used for famine relief [23]. They also commandeered peasant grain surpluses. The local agricultural economy was left in a perilously fragile state and in 1915 it collapsed into a disastrous famine. "The famine this year," wrote the teacher Obed Kasembe, "is greater than any famine I have known in my life; perhaps it is equal to the famine in Canaan in the days of Joseph" [24]. "I was given very hard work," wrote Edward Abdallah, "the task of carrying food for the Germans, and taking it to their stores. I did this work for the space of a year and in the year 1915 we had a terrible famine, and for the space of four months I buried six to ten people every day.... We had no food at all, not even a little, only the insects in the bush" [25]. Famine was followed by disease. Deacon Silvano Ngaweje was in charge of Mnyambe parish. "In 1915 there was a severe famine which extended over a wide area, and in many places many people died, and half the Christians who had been baptized at Mnyambe died." Then "from December 1918 until May 1919 Mnyambe and the whole Makonde district was overrun with smallpox and a disease called influenza.... As a result... very large numbers of people died. The scourge lasted for a period of six months. The Christians and Catechumens who survived the famine of 1915 perished of the smallpox and the coughing" [26].

It was into this disaster that mission Europeans returned in 1919. Their medical services appeared ludicrously inadequate. "We have had sad epidemics of small-pox and influenza, with many, many deaths," wrote Vincent Lucas, priest in charge of Masasi. "Miss Horne carried on dispensary work despite the almost complete absence of any drugs except quinine. Influenza and small-pox claimed a large death toll, but she did all she possibly could" [27, 28].

Of course, the numbers of mission medical personnel thereafter increased and their drug supplies improved. Nor was there again a disaster on the scale of the war. But the district had not recovered from the war when severe economic depression set in—beginning in 1926, the year of Dr Taylor's arrival. As we shall see in more detail, poverty and under-nourishment fostered recurrent epidemics of measles and whooping cough right up to 1945, with consequent heavy infant mortality [29].

It is hardly surprising that the people of Masasi region did not see mission medicine as a liberation from disease! Instead they made various attempts to comprehend these misfortunes. It was reported that the people looked on the influenza epidemic "as a judgement upon Europeans for the war, and therefore as being another burden which the Africans had to bear for the sake of their white brothers. As it was a new plague they invented a new name for it, so with a touch of African humour they called it 'bom-bom' because the explosive cough reminded them of the noise of the cannon" [30].

On the Makonde plateau, so the Newala district book informs us, people believed in a malevolent deity of epidemic, known as Nandenga to the Makonde and Nayapuru to the Makua:

Nandenga is a malevolent mythical person who, when not occupied, lives in a large tree, a lonely valley or hill. He is believed to take on human form in various guises, young and old, tall and short, but has the distinguishing characteristic of long hair. His activities are widespread, as opposed to the more localized 'uchawi' (witches). Against him the 'Mahoka' (departed ancestors) have no power. For example, the great plague... of smallpox during the war was attributed directly to Nandenga. He was alleged to have travelled the country from village to village with a large vessel containing the... disease, sprinkling it in various proportions in the villages.... The measles epidemic of 1928 was considered to be the work of Nandenga against whom the clan 'mbepesi' (ancestral flour) was powerless. He cannot be supplicated. One must just bear the evil he brings [31].

The extreme pessimism of this interpretation was, however, modified as it came to be believed that children could be saved from Nandenga's wrath if certain rites were observed. As late as November 1945 Lyndon Harries was recording that "only last year in a non-Christian area I found that children had been shaved on one side of their heads. There had been an epidemic of whooping cough, and it was believed that the tribal gremlin, whose name was Nandenga, would pass over all the children whose heads had been shaved and not afflict them with the... complaint" [32]. Harries was perceptive enough to remark that such a belief did at least give some comfort in an otherwise comfortless situation.

TRIUMPH AND FAILURE: YAWS AND MEASLES

It would certainly be misleading to imply that mission medicine had no successes at all in Masasi. In fact it had at least one spectacular success, if a paradoxical one. In Masasi some of the tropical diseases turned out to be relatively easy to deal with; and missionary medics were optimistic about eradicating all of them. It was the familiar diseases infiltrating

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from Europe which before 1945 defied all attempts at treatment by the medical missionaries.

Tropical diseases had at first seemed a terrifying obstacle to missionary penetration of the East and Central African mainland and the U.M.C.A. had a tragic record of missionary deaths. But by the time that medical work began in Masasi district the mission had come to feel a new confidence in its capacity to overcome African disease. In May 1921 J. B. Christopherson, M.D., F.R.C.P., F.R.C.S., demanded massive government support for mission medical work on the grounds that it was now plain that great victories could be won:

In no department of medicine has progress been so rapid in recent years as in tropical diseases... There is no branch of medicine where disease is treated with such confidence and exactness nor where the result of the treatment is so satisfactory and conclusive as the diseases of the tropics. It is no exaggeration to say that the treatment of such tropical diseases as ankylostomia, bilharzia, yaws, malaria, dysentery... had advanced out of the realm of hope, or even of legitimate speculation. The cure of such tropical diseases is almost a matter of mathematical calculation [33].

"If only government would provide the necessary money and drugs," wrote Christopherson, the mission could "check and eradicate the many dangerous diseases, epidemic and endemic". After all, "the economic prosperity of tropical Africa depends on the country being made healthy", and "medical science points out the surest way of solving the labour question". Smallpox, hook-worm, malaria, yaws, bilharzia—all were capable of "being stamped out", so that "the vast, unhealthy areas of Africa became habitable, healthy and profitable".

The medical man is the modern 'pioneer of civilization' in tropical countries. No one has the qualifications of a British doctor for liaison work between Government and native—no one has a greater influence, he is in touch with the natives in their homes and he can break down native mistrust of European methods... A doctor's reputation in the tropics radiates for miles, patients walk a considerable journey to consult him. But his reputation is also in proportion to the good he is able to do his patients—and this depends on the medical paraphernalia at his disposal. 'He cannot perform miracles without money.' As the native only judges by results the doctor should be adequately equipped to make the result successful... Every case cured... is placed in the native mind to the credit of the Government [33].

Christopherson was being over-optimistic; knowledge of most tropical diseases and capacity to treat them had reached a sort of plateau by the 1920s and little advance was to be made until the development of anti-biotics. But at least in *one* area it seemed that miracles were being performed. In August 1923 *Central Africa* rejoiced:

People say that the age of miracles is past. From a mere layman's point of view it certainly is *not* with regard to the work of healing, and still less from the point of view of the African. It is to us and to them miraculous the way in which things are done and the people healed... There are these wonderful injections... again to a layman miraculous to a degree—and some of you may have read of that splendid recovery by this means of a man who after suffering for over a year from a painful disease was cured in four days,

and who was met on the road shortly afterwards literally dancing for joy [34].

These miracles of healing were achieved in Masasi with sufferers from yaws, the one tropical disease to which through a sort of lucky accident of discovery effective remedies had been found. The treatment of yaws, indeed, was the most attractive service offered by the mission to Africans. Thousands flocked to the clinics from all over the south-east, until the movement of people took on some of the dimensions of a mass pilgrimage. But even here there was remarkably little of the predicted carry-over effect. Readiness to come for yaws treatment did *not* break down a more general 'mistrust of European methods'; a successful cure did *not* rebound to the credit of government; the pilgrimages receded leaving very few converts. In its intensity, its periodic and spasmodic character, and in its isolation from general notions of misfortune and healing, the movement of yaws victims to the mission clinics resembled nothing so much as an indigenous healing cult, of which there had been a succession in this region.

Yaws, or mbelegu, was in the words of Leader Stirling: A horrible disease beginning with a foul ulcer in some part, usually the leg, and continuing with tumid sores all over the body. Later, deep ulcers break out in various parts, bones ache, swell and rot away; sometimes a large part of the nose and mouth may be destroyed. After many years the disease eventually dies out leaving the victim more or less scarred and crippled [6, p. 21].

According to mission doctors, 'native remedies' were 'absolutely powerless' against yaws [35]. The child readers of *African Tidings* were told that "the medicine man's cure is that poor patients should starve and drop red hot charcoal on each sore every day" [36]. At any rate, yaws sufferers were responsive to any immediately effective treatment.

There were four such offered in the sequence of mission dealing with yaws. The first, before the first world war, was potassium iodide, applied externally to the sores. "It heals most wonderfully," exclaimed Dr Howard [35, p. 239]. In Masasi district the first yaws pilgrimages began to Luatala, the headquarters of chief Matola II where Nurse Dunn had opened a dispensary. Used to the timid reluctance of their patients, the nurses were taken completely by surprise by the rush. "They come from such distances now," wrote nurse Dunn in September 1913; "today three turned up from the other side of the Rovuma. We have seven tribes represented in hospital—Yao, Makua, Nyasa, Ndonde, Mwera, Makonde and Angoni. Of course, it is the marvellous treatment for *mbelegu* that brings the people. My potassium iodide is finished" [35]. Pressure soon built up on Luatala dispensary and increasing quantities of potassium iodide were sent and consumed. The movement had become a popular one and had escaped all control by the mission. "They are packed like herrings in a barrel," wrote nurse Dunn, "and there are numbers staying in the villages around and coming daily for treatment. They come and bring their food and *insist* on staying... I am at my wits' end" [37]. By the next month she was complaining "they are a problem and I feel completely overwhelmed. We talk of sending to the Makonde chiefs to tell them to prevent the people

coming! But can one open a dispensary and then tell people to stay away? They come in droves! ... I feel so helpless" [38]. But the rush continued unabated into 1914. "The hospital at Luatala is a wonderful sight," wrote Miss Andrews in July, "a great camp of some 220 people and 50 or 60 little fires at night". By this time the dispensary at Masasi itself was similarly besieged [39-41].

The outbreak of the war and the internment of the nurses brought this first phase of the yaws pilgrimages to an end. In any case by that time the medical limitations of the treatment were becoming apparent to the nurses. The potassium iodide 'takes months to really do them good' and the yaws sufferers were not prepared to undergo long-drawn out treatment. So far as they were concerned the initial striking improvements in their conditions did not proceed from anything analogous to the craft of the herbalist; nor did they appear as one part of a systematic explanation of disease. They were 'miracles'; instantaneous cleansings similar to those promised in the period movements of witchcraft eradication. One applied an ointment, one observed for a while the new ritual of the dispensary, and that was or should have been that. "Some of the people are very tiresome about coming regularly", complained the Masasi nurse; "perhaps they come every day for a week or two and then disappear for weeks. When they do return all the good they have derived from their medicine is entirely undone. Very often they have not the patience to follow up the treatment; but seem to think they ought to be cured at once, and so go off to try all sorts of native treatment" [40, p. 243]. But after all, at the dispensaries it was all ritual and no communication. The nurses could speak Swahili but none of the 'tribal' languages, and hardly any women in the Masasi district spoke any Swahili at all.

The war period saw a great recrudescence of yaws among all its other misfortunes. Those 'cured' by the potassium iodide relapsed. Once again, this was very like the relapse that inevitably followed the eradication of witchcraft. After the war, people were ready to try another movement of healing. For a while they were offered nothing new. When the nurses got back to Masasi district they still used potassium iodide, though with increasing reluctance because they knew that in those parts of the U.M.C.A. territory which had doctors, a new 'miracle' treatment of yaws by injection had been developed. In 1924 a nurse at Lulindi hospital looked back on these frustrating years:

Quite three fourths of the dispensary and hospital patients are suffering from yaws. We did our best to help them, and nurses and dispensary boys day after day put on a patchwork of gauze and idioform, and later an ointment over the numberless ulcers. We tied on bandage after bandage, and at the same time they were given an expensive drug which had the effect of cleaning up and healing the ulcer in about six weeks to two months and relieving the pain. If we had had enough of the drug, costing 1 pound a pound, and if the patient had had the perseverance to make visits to the dispensary week by week for three to six months' course of the drug, we could sometimes have obtained a permanent cure; but this did not happen often. The African saw himself apparently healed and went off home to the engrossing job of planting and harvesting. He forgot the nurse's injunction to come regularly.... The nurse might

perhaps be excused for thinking what was the good of going on in the face of this constant relapse [42].

Meanwhile in Nyasaland and north-east Tanganyika injections of novarsan—*novo-areseno-benzol*—were being given under the supervision of mission doctors. The nurses in Masasi, where there was still no doctor, read the exultant reports of miracle cures in *Central Africa* with a great deal of envy. "Yaws is the country's enemy," wrote Christopherson in 1921. "It is quite curable; the cure (*novo-areseno-benzol*) is expensive, 10s a dose now, but each case needs only one dose. It should be used energetically on a large scale" [33, p. 90]. "Till recently," wrote a north-east nurse in 1923, "treatment was far from satisfactory ... now ... an intravenous injection or two is enough to cure the worst cases and a course of medicine after the injection is given to ensure the permanence of the cure." "I don't wonder these people think that miracles are happening," wrote a nurse from Korogwe; "one is amazed oneself" [43].

Early in 1924 the new injections came to Masasi. The district was visited briefly by Dr Mary Iles, who introduced the newly developed and cheaper bismuth sodium tantrati solution, which could be injected intra-muscularly and could thus be handled by African dispensers as well as by nurses. In a great outburst of delight—printed in *Central Africa* under the heading, "And There Was Great Joy in That City," the Masasi nurses recorded the transformation:

One injection—sometimes two—quite cures the early form: the horrid sores dry up, often in two days, and the two years of misery are saved.... We have been given a means of helping and relieving what was a weight of almost unbearable misery and hopelessness to both patient and nurse [42, pp. 93-4; 44].

At once there began again the yaws pilgrimages. "We have simply been swarmed ... they have come in batches ... the hospitals at Masasi and Lulindi are more like gipsy camps than anything else." Dr Iles' medical report for 1924 [45], revealed very clearly that the medical work of the mission was focused almost entirely on yaws. Between January 1st and September 30th 1924 out of 618 in-patients at Masasi hospital no fewer than 504 were yaws cases and 66 with other forms of ulcers [45]. The fame of the needle—*sindano*—spread far and wide; people came for very long distances; and so soon as a dispensary was opened in a new part of the district there were at once crowds of yaws patients [46, 47]. The atmosphere was very clearly that of the spontaneous and intense movements of mass cleansing. The nurse at Lulindi reported a patient with a large growth on the leg, who had been told that the injection was no use and that only an operation would help: "I have been five days coming here. Lots of people from where I've come from have been cured—and they told me you would cure me. What have I done that you should deny me? Do you know anything about me that you won't give it to me?" [48].

The intense movement was short-lived. By 1927 there was "a very marked decline" in the numbers coming for yaws treatment; for the first time the Masasi dispensaries and hospitals began to treat a wide range of diseases [49]. This decline, so Dr Taylor hoped, was "due to the success with which

hundreds of cases were treated in the three or four preceding years" [49]. But there was also a little disillusionment on both sides. It turned out that one or two injections did not, after all, produce permanent cures. As Leader Stirling later wrote:

After one or two injections they would see such a dramatic improvement that they were quite satisfied, and no words would persuade them to continue with treatment until they were fully cured. So the disease smouldered on and infection continued to spread [6, p. 21].

The instant, final, miracle cure had to wait until "the use of long-acting penicillin" after the second world war. Then there took place the third of the great yaws pilgrimages. It also turned out that, ready as they were to observe the immediate rituals of the dispensary, the yaws patients did not convert to Christianity. As Dr Taylor wrote in 1929 "from the missionary point of view this part of our work at first sight seems of very little direct value, for the patients rarely stop long and often come from great distances, so that it is useless to try to teach them the Faith" [50].

Conversion to "European methods" was even less likely. It was accepted that the Europeans could treat yaws, but it was observed that they manifestly could not treat many other things. "There are diseases which English medicines cannot cure at once and the African medicines can cure it," wrote a group of African schoolboys in 1928.

European medicine is very good if a man gets yaws (but we have some very big diseases and Europeans cannot cure them. They cannot cure elephantitis and they cannot cure snake bites, but African doctors can. If you have been bewitched by evil spirits... Europeans cannot cure you, but African medicines can cure these diseases at once [51].

The schoolboys tactfully ended by remarking that "European medicine can cure them and us, but African medicines cure ourselves only" [51].

For many Africans out of school the analogy with the healing or anti-witchcraft movement seemed the most striking. There were a series of these in the Masasi district between the wars, a response among other things to the recurrent epidemic disease and famine. Such movements were, in fact, anti-medicine, commanding their initiates to throw away both African and European medicines. But the attitude of these movements to the yaws injections was significantly different. In 1929, for instance, the *Amanjingo* movement entered Chidya district, where there had been a dispensary treating yaws since 1927. The *Amanjingo* messengers summoned people to a ceremony of purification, of ritual shaving and a communal meal. Disease and misfortune was explained in spiritual terms and was to be dealt with by mutual aid and repentance rather than by medicines or other external means. No one was to be bewitched anyone else; "there should not be any quarrels in their house". No one should go to a herbalist. And "no hospital medicine is to be used *except injections*" [52, 53].

While these ambiguous triumphs over one tropical disease were taking place, Masasi district was being ravaged by epidemics of non-tropical diseases, and in particular measles. The problem was not that Europeans could cure only some African diseases as well as their own diseases; it was that they could cure

some African diseases but could not cure many of their own. Measles was regarded as a very minor part of the appalling health situation at the end of the first world war. "We have had sad epidemics of smallpox and influenza," wrote Vincent Lucas in July 1919, "but things are better and the only local epidemic now is measles" [27, p. 170]. Measles perhaps sounded a childish disease to Lucas. But in the later 1920s, as the economic depression deepened in Masasi and diet grew yet more impoverished, measles came to be the major killer of children. In 1926 there was "a great deal of sickness all over this part of the country...whooping cough, measles of a virulent type and influenza also of a bad kind" [54]. In Masasi parish itself "there was scarcely a home without at least one or two ill. The children suffered dreadfully and the death rate amongst the babies must have reached a very high figure" [55]. The *Annual Report* for the year 1928 remarked:

If 1926 was called a year of famine, 1928 must be called a year of illness, and the two were probably more closely connected together than we can trace. Along the coast road came first an epidemic of measles. This should not be in itself a ground for alarm. But the cases proved almost all of a virulent type and grave complications supervened, with the result that mortality was high and the lines of children's graves grew longer and longer [56].

The next great measles epidemic came in December 1936. It was "followed by serious complications and in many villages there has been very heavy child mortality". There was little that the mission could do to help except to supplement diet. Dr Taylor wrote:

In districts near our hospitals and dispensaries we have been able to help... As the epidemic drew to its close in Masasi, it was a common sight in the dispensary to see a row of out-patient children, thin, miserable little things, drinking milk out of large blue enamel mugs! It made all the difference to their convalescence... If we could have sent our dispensary assistants out to the out-stations as we did to the houses fairly near the hospitals, taking medicine and if necessary milk to the children, the mortality could have been decreased everywhere [57].

In 1938 Silvano Ngaweje reported from Chiwata that "diviners had been going about lately, deceiving many people." It was not co-incidental that he also reported "sickness; an epidemic of measles and coughs, many children had died of measles" [58, 59]. Through the years of the war there were epidemics of measles, whooping cough and influenza [32, p. 122; 60, 61]. It was only after the war, when the mission had supplies of dried milk to distribute, that the nurses and doctors fully appreciated the chronic malnutrition of the children of Masasi, which made these diseases so deadly [20, p. 34; 62]. As the realization came to them, they wrote of the medical situation in Masasi in terms very far removed from triumphalism. In 1945, after half a century of medical work, Leader Stirling told the annual anniversary meeting that his area "was riddled with disease". Lyndon Harries quoted with approval A. T. Culwick's scathing indictment of the "product of a quarter of a century of British rule in East Africa... a native population still riddled with disease, badly housed, poorly fed and living in the most abject poverty". "Children suffer from measles, whooping cough and chicken pox, and

the first of these is one of the most common causes of blindness" [32, p. 121; 63].

The missionary medics did not think that all this was primarily their own fault. But it was hardly surprising in view of it that mission medicine had not produced a scientific revolution in attitudes. "So long as the economic life of the people remains as it is," wrote Harries, "a life of deep poverty...subject to constant famine...there can be no doubt that the old way of life is bound to prevail" [32, p. 122].

THE LAY THERAPY GROUP AND THE TREATMENT OF MADNESS

Lyndon Harries believed that the poverty of Masasi district was an inheritance from the pre-colonial past. "So long as these Africans find themselves dependent on the same low conditions of life as they endured before the days of Dr Livingstone, there can be no doubt that the old way of life is bound to prevail" [32, p. 122]. The case was in fact rather different. Poverty in Masasi had assumed new forms—there were new patterns of disease; famine had become more endemic; migrant labour and tax demands exercised new pressures. Few of the inhabitants of Masasi district supposed that they were living 'the old way of life' and many of them tried to find new ways of coping with misfortune. The treatment of disease lay at the heart of this search.

It lay at the heart of it not only because disease was the most specific of misfortunes, but also because decisions about the treatment of disease involved collective discussion and determination. An individual might decide to become a Christian; but when that individual fell seriously ill it was his kinsfolk, his *jamaa*, who determined how he should be treated, whether they were Christians or not. The Masasi evidence for what Janzen has called "the lay therapy group" is very strong. Dr Stirling, writing home in June 1935, remarked that "operations are greatly feared in these parts, and often we cannot get consent to do the most necessary operations. The relatives (who have all the say) prefer to take the patient home to die" [64]. Stirling wrote in 1940:

The decision rests with the elders of the family and not with the patient himself. The individual is only of importance as a member of the tribe. A patient's leg is not his own property, but a piece of a part of a family, and if you want to cut it off you must ask the elders of that family, and a single veto from an important relative is usually final [65].

The sole right of the *jamaa* to determine was jealously guarded and periodically re-asserted against European medical authoritarianism. In July 1938, for example, Dr Frances Taylor operated in a difficult child-birth case. The mother died. As the priest in charge recorded in the Masasi parish log-book:

Akumachinga came to explain business of a woman operated on by Dr Taylor before her *jamaa* consulted. He says that the only person with any authority, Bartlett's mother, Neema Nakaam, refused to consent all along and her 'mjombe' who was sitting outside...was not aware that there was any undue danger, until in the last few minutes he was called inside. I said that I did not know all the circumstances of the case but that we Europeans always tried to align our customs with those of the Afri-

cans... (The family asked me) to write this down and when the Bishop returns (they) will seek an opportunity to explain the whole matter to him.... Dr Taylor was wrong to operate [66].

But if the doctors sometimes found the rights of the *jamaa* an impediment, in other ways they were obliged to rely heavily on the action of the family as a therapy group. It was family members who carried in the sick, often over very long distances, and it was family members who remained to tend the sick and to cook for them once they were in 'hospital'. Since European nurses were behaving like doctors, it was left to the *jamaa* to do the nursing. "We like the patient to have one relative with him," wrote Dr Taylor in 1929, "for it is difficult to get anyone to cook and fetch water for him otherwise" [67].

The *jamaa* were not merely determining on whether or not a patient should have an operation—and observing it when it took place. They were also determining whether an illness required European medical treatment at all. The log-books often record a Christian father summoned in for rebuke by his parish priest because one of his children had been sick and a diviner had been summoned. Time and time again the father explained that in this matrilineal society it was not *his* responsibility to determine the treatment of his child but that of the matrilineal relatives. Hence illness in a Christian family at once involved the wider society in a series of choices among alternative therapies.

In the 1920s and 1930s there were, in fact, an abundance of alternative therapies to choose from. It certainly was not a simple confrontation of European medicine and 'the old way'. Apart from mission medical work, there was a steady penetration into the district of Moslem ideas and practices of healing. And there was plenty of innovation outside Christianity and Islam altogether. To the long established diviner and herbalist were added the emissary of the anti-medicine movement and the witchcraft eradicator. The *jamaa* were confronted with a bewildering variety of remedy. They made full use of them. While they were choosing European treatments for yaws, they were choosing Moslem and indigenous treatments for a whole range of other ills.

This whole area of ambiguity is perhaps best illustrated by the problem of madness. This was a problem which before the introduction of tranquilizer drugs the mission doctors had little idea how best to treat. As Leader Stirling writes:

Until quite recently, the problem of mental illness was largely ignored in Tanzania.... In the whole country there was only one general mental hospital for all types of insanity.... None of the ordinary hospitals, either Government or Mission had any facilities for dealing with such cases, and were naturally reluctant to admit them. Consequently the 'harmless' kind were simply left to roam the roads and villages.... Only when they became violent was any action taken. First they would be tied up with rope in the village. Then, if they could not be controlled, they would be handed to the police, whose duty was to dump them handcuffed in the nearest gaol [6, p. 110].

Yet it was not a problem which the mission could ignore. Their own African clergy and teachers, placed as they were in a position of intolerable tension

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between two sets of values, were peculiarly vulnerable to mental breakdown. In such cases the mission had to try whatever medical remedy might be at hand. Sometimes the clergy even attempted spiritual remedy. Meanwhile the *jamaa* of the afflicted men turned to a whole set of other treatments.

Moslem methods were regarded as particularly efficacious in the treatment of insanity. The Masasi parish log-book records a number of cases of Christians whose *jamaa* had had recourse to Moslem methods. On June 15 1909, for example, it was recorded that:

Rhoda Akumbilipe accused by Miss Clutterbuck of wearing a charm to drive away 'pepo'. Her relatives say that a *safari*, resting in the village, seeing the girl running and jumping about, gave her the 'charm'. The poor child looks very mad [68].

Madness was here being explained in terms of possession by evil *pepo* spirits and during the 1920s and 1930s the exorcism of such spirits by means of drumming and dancing increasingly spread off the Makonde plateau and across the wooded plain to Masasi. It was because of these exorcisms that Miss Andrews found that "the whole place throbs with the tom tom wherever one goes". More orthodox Islamic healing was also drawn on by Masasi Christians:

After evensong, I went to visit Ketil Chilangwe who is ill, mental disorder. When I arrived I found a Muslim teacher who had been called from Kanyimbi by the relations to use his medicine to drive out the spirit. He was sitting on the ground reading the Koran in Arabic in a loud sing-song but he obligingly ceased while I remonstrated with the relations but to little purpose. As I could not quarrel with the teacher who was there by invitation I retired as peacefully as possible [69].

But the dilemma is best brought out in two tragic cases—those of Deacon Benedict Njewa and of *mwalimu* Michael Malesho, whose insanity was interpreted by their relations as the result of witchcraft.

Njewa was a Makua who had been taken out of village life and sent to Kiungani, the mission school on Zanzibar. He married one of the freed slave girls who had been educated on the island, and was hence able to avoid the obligations to his wife's kin which a local marriage would necessarily have involved. In August 1907, after three years' further training in Zanzibar, he became a Deacon. Vincent Lucas found him "a delightful companion, a warm-hearted, most keen and zealous worker—a man with a real spiritual life of his own". But Njewa came to feel his distance from his own kin intolerable and he was distressed, too, by the hostility he aroused in his denunciations of the sins of the Christians. As Lucas wrote:

His strength was no longer equal to the strain, and we soon became anxious for him and greatly feared that he would break down. One day, in unnatural excitement, he spoke of giving up his work at Miesi altogether and going right away to live with his relations (who were still heathen with the exception of two—and they in sin) and try to convert them.... Padre Webb had a very trying Sunday with Bene at Miesi, and on that Monday morning (in October 1912) he left him with grave misgivings, and was not surprised to hear on the Tuesday that he had gone out of his mind. He had gone in a state of great excitement to the government *boma*, taken off his cassock and girdle and

folded them up and asked that they might be sent to the Mission, and then instantly became insane and violent [70].

The Masasi log-book carried on the story. On December 30th 1912 Lucas recorded:

I found a letter... from Kate, wife of the Deacon Bene, telling me that Bene is worse. He refuses to wear any clothes and becomes violent. The house he lives in has burnt and was with difficulty rescued; he gets no sleep, but makes a great noise day and night and digs with his hands incessantly. She says that he has been undoubtedly bewitched [71].

On January 15th 1913 Lucas went to Mkalingula to see Njewa, together with Archdeacon Hallet and Miss Kemsley:

We found him yoked and fettered and fastened to a log... He seemed happy, recognized us and said very little which showed madness.... We found a native *mganga* from Luwatala there treating him; he assured one of our porters that he had been bewitched and made like a certain animal... hence the digging in the ground. The chief Akumanga and Bene's wife and relations believe that he has been bewitched. They regard my suggestions that we should bring him down to Masasi as quite impracticable and told me that Elisha Tangale, whom they suspect of bewitching him, alone can remove the spell [71, 15 Jan 1913 entry].

Lucas was, however, allowed some time alone with the afflicted man. Njewa "pointing to his heavy yoke reminded me that I had spoken to him of the necessity of our sharing in the Cross". Deeply affected, Lucas:

tried to exorcise him, but with some doubt and hesitation, for he seemed to have none of the normal marks of possession. However, he obtained some sleep after this, which I was told he had not had for a long time [71, 15 Jan. 1913 entry].

Then "in the morning the relations told us that the man whom they suspected of bewitching him had come—a Christian, living fourteen years in bigamy, whom Bene had denounced—and we must not see Bene or we might damage his chance of recovery" [70].

The missionaries withdrew. But Elisha Tangale denied the charge and Njewa's relations called on Lucas for help. He recorded:

A letter came today from Bene's wife Kate asking me to accuse Elisha at the boma on the charge of witchcraft that he may be imprisoned tomorrow or the next day. I replied that the accusation must come from themselves. P. S. Elisha was accused and the case dismissed on the grounds of no real evidence [71, 2 Feb. 1913 entry].

Njewa's relations now abandoned hope of curing him. Meanwhile Lucas, whose hesitant exorcism seemed to have done no good either, was moving to the view that this was a case for expert doctors. "I found out that there had been two cases of madness amongst Bene's near relations". So Lucas reported the case to the Germans who took Njewa to the coast where he was treated by the government doctor. Six weeks later, November 8th 1913, he died "out of sheer exhaustion" [70].

The case of Michael Malesho presented the mission with similar agonizing choices. Malesho had been

head-teacher at Kiungani and later acted as head-master, sacristan and cantor at Luatala. He served Luatala at a very difficult time, when Daudi Machine, the first African priest, who had built up the parish, had been dismissed by the bishop and a European put in his place. Malesho had supported the white newcomer but he had been well aware of the hostility which this provoked from the majority of Luatala Christians. He had also been engaged in a confrontation with one of his kinsmen, Petro Ngole. Ngole had studied at Kiungani and gone on to be a mission teacher. But his father, who was chief at Chilimba, 'was hanged by the Germans for killing a near relative by *uchawi* (witchcraft)'. Petro inherited his father's 'wives as slaves' and carried them off to settle on the river Bangala, from where there came 'ugly rumours as to witchcraft and other deeds away there in the heathen darkness.' Malesho had tried to bring his kinsman to repentance.

One night in 1913 Petro Ngole was staying in Malesho's house, in order that he might present his case to Bishop Weston who was visiting Luatala:

One evening, after Compline, we retired to our respective huts, and Michael went across to the Bishop's 'Palace.' An hour or so afterwards we heard a loud voice in Great Court. In the course of conversation, Michael had suddenly stood up and bowed to the Bishop, saying in English, 'Good God, what shall I do?' And now he was raving in the Court and the Bishop was trying to pacify him. The aid of the nurse was summoned. Every effort was made. But he broke away, singing, into the forest, and finally had to be secured for the night with a chain borrowed from the Akida Matola [72].

Malesho's family took him back home, where he sat 'in a hut, with his neck fastened in the fork of a tree branch'. They tried to indict Petro Ngole for witchcraft and have him remove the curse. They failed. Eventually the Luatala station layman, Anderson, and nurse Dunn persuaded the family to let Malesho come back to live under their care at Luatala [73]. Anderson and Dunn were removed from the station during the war. Malesho died of starvation.

Like Njewa's, it was a case that provoked serious thought even if not effective action. "People say he has been bewitched," wrote J. F. C. Fixsen, the priest with whom Malesho had been allied. "I don't know but it strikes me that if we can believe that witchcraft has power over a faithful Christian, we are also bound to say that he can certainly be cured by exorcism or other spiritual means. Otherwise we seem to assert the greater force of the powers of evil" [74].

In default of any effective answer to this dilemma, African Christians chose to use their own means of confronting 'the powers of evil'. In September 1928 it was reported that the niece of one of the African priests was ill with "some kind of hysteria", and that the uncle had been persuaded to take her in to the mission hospital at Newala. A couple of weeks later, however, it was noted that "padre Isaya's niece is quite better now, having been cured by a native *fundi*" [75].

ALTERNATIVE THERAPIES IN THE CHRISTIAN VILLAGE

The topic of madness has enabled us to see the dilemma of how best to interpret and treat disease

operating at the heart of the families of African clergy and teachers. The log-books of the sub-parishes enable us to see the process at work in the Christian village as a whole. The log-book of Napacho parish, for example, reveals a series of African teachers trying to combat the villagers' recourse to witchcraft eradication rituals or to exorcism dances. The teachers urged their fellow Christians to 'depend on God only. We should endure our troubles fear and doubt'; they advised them to take their sick to hospital. They often failed. Villagers took the medicine of the *Mchape* witchcraft eradication movement in December 1933; they treated children for measles through the *Iyoto* exorcism dance; and when chided by the teacher a defiant parent would reply, "I am not doing this to the teacher's child. This is my own child" [76-78].

Teacher Mowala of Mkoma village encountered in November 1941 overt opposition from the *jamaa* of a local Christian:

In the evening I went to visit one of the Christians who was ill.... I advised her relatives to take her to hospital, but they refused, saying that her illness could not be cured by hospital drugs. I asked them why they believed so and they answered that this was a disease of the spirits (*pepo*). They told me that in order to have her cured they would have to play the *Ngoma ya Majini*. I explained to them that since she was a Christian it was improper for her to indulge in such rites. Then Che Kuthbert Nayopa (the husband) also said that he too did not like these rites, but his wife's relatives answered: 'This is only your wife and not your relative. We are related to that woman and we reserve the right to do what we wish. We don't prevent her from membership of her religion but we also don't like you to interfere with our affairs. It's all our business'. Kuthbert kept quiet and never said a word.... They insisted on playing the *Ngoma ya Majini* and refused to take the sick woman to hospital [79].

In such circumstances teachers often felt themselves to be in a position both dangerously exposed and ill-defined. Teachers feared witchcraft used against them by parishioners whom they had rebuked. They feared that their own resort to European medicine was in itself a cause of ill-feeling. "Many people here are Christians," wrote A. D. Mateso in the Tandahima log-book for May 14th 1950, "but they still believe in heathen traditions. I am really worried because the people here are discontented because I took my child to get some medicine for he is sick. Should I leave him without medicine?" [80].

Teachers themselves had little well founded appreciation of the scientific arguments for missionary medicine. They condemned alternative therapies not because these were bound to be ineffective but because they were outlawed by the mission. In fact many teachers believed that alternative therapies often were effective, and there is a good deal of evidence that they sometimes drew upon them when their own families were sick.

In this teachers were at one with some of the most convinced of African Christians. Church elders disliked the professionalization of European medicine which undercut their own role in the healing of their own communities. In December 1932 the elders of Lukwikwa parish, where a mission hospital had recently been set up, asked the Bishop to allow them to call together all the "older people to discuss the

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number of deaths recently". They promised that *Chisango* divination would not be used "and said that the only purpose of the meeting was to comfort and encourage one another" [81].

African priests shared many of these attitudes. As late as 1968 one of the students of the University of Dar es Salaam interviewed her uncle, the retired U.M.C.A. priest, Petro Ligunda. In his account of medical change we can see all the ambiguities of the process:

Chisango in those days was used by the witch-doctors... as we use hospitals nowadays. The witch-doctor used to keep many *chisasi* gourds, each with its own medicine inside, just as they keep medicine in bottles at the hospitals... When the missionaries came they tried to convince the people that their new faith was better than their belief in *Chisango*... The setting up of hospitals helped to prove the fact that the hospital's medicine was better than the witch-doctor's. But I don't think the people were wholly convinced that the hospitals could cure everything, because up to this time people are attending the 'African doctors' hospitals' and they really do help since there are some diseases that cannot be completely cured at the hospitals. I believe that our doctors' medicine is good as long as it does not bring harm to the people... We parish priests were told to preach on the fact that no Christian was allowed to use *Chisango*. We had to set an example, so we avoided this as much as possible. But... people's faith in the African doctor did not die completely since they still go up to be treated and some get cured. We cannot leave our traditional pattern of life—however much the pressure is exerted on us. It is part of us and if we feel something is good we do it [82].

MISSIONARY ADAPTATION AND MEDICAL MODERNIZATION: THE CLASH OF CONCEPTS

By the 1930s the U.M.C.A. Europeans had come to realize that mission medicine had not been triumphant after all. The white clergy reacted very differently from the white doctors and nurses to this discovery. Vincent Lucas, by now the first Bishop of the diocese of Masasi, plumped for adaptation. In July 1935 Lucas expressed his concern "with two great problems". The first was how to provide an adequately 'African' education:

The second great problem... concerned the medical work of his diocese. Despite all that had been done by white nurses and doctors, there was still a tendency to view medical efforts with suspicion, and with the exception of treatment by injection, to prefer the native charlatans who peddled medicines capable of affecting the most wonderful cures (so they said). The success of such people as the *Mchape* showed that we must discover some way of relating our medicine to their medicine [83].

The doctors and nurses, on the other hand, drew the conclusion that more modernization was needed rather than less; they put their faith in a more effectively scientific education so as to produce African dispensers and nurses who were fully committed to the gospel of Western medicine; they did not wish to relate to African medicine; and they condemned the Christianized initiation rites, of which Lucas was so proud, as dangerously unhygienic.

What was going on was partly a product of the late development of mission medicine in Masasi. The church itself had been established there since the

1870s. It had long passed from the stage of evangelization to that of pastoral consolidation. It had built up its network of African clergy and teachers, who shared with the white clergy a vested interest in conservatism, in maintaining the village as the viable unit of Masasi society. This African Christian elite fully supported Lucas' policy of adaptation, because control of the Christianized initiation ceremonies gave the teachers and clergy a source of communal power and prestige. Meanwhile, the medical mission was still in the stage of evangelizing out-reach; it was trying to build up its own African personnel under the cautious and authoritarian regard of the established teachers and clergy. In their eyes the policy of adaptation merely meant that Africans would not be confronted in their erroneous therapies; it also meant that medical work in Masasi would remain the laughing stock of the rest of the mission. In December 1934, for example, a U.M.C.A. nurse in Nyasaland wrote to *Central Africa* to correct any impression that all mission medical work was like that in Masasi district. "The work at Lulindi sounds quite primitive... I feel that I could never again work in mud huts." In Nyasaland nurses worked under "almost the same conditions that I have done in St Thomas's Hospital"; as for the *jamaa*, "personally I only allow relations to stay if the patient is very ill, and then under no conditions are they to be allowed to interfere in any way" [84].

Doctors Taylor and Stirling and their nurses set out to modernize. In 1929, wrote Dr Taylor, "I brought back from Nyasaland full particulars of the training the training and grading of the African dispensary boys" [85]. But recruitment was a slow process. "We try and train boys as assistants," wrote a nurse in 1933, "but dispensary work is still looked on as inferior sort of work for which brains and education are not needed... The African boy's ambition is to be a teacher, which gives him a status and is remunerative". The only boys who would volunteer for dispensary training were the dunces, who on "the slightest deviation... lose their heads entirely" [86]. Dr Taylor lamented the absence of trained African staff in 1936 and 1937 during the measles epidemic—a network of 'Africans put out in charge of small dispensaries of their own' could have ensured improved diet for afflicted children. The Masasi medical staff would certainly have endorsed the claim made in *Central Africa* in July 1939 by an African dispenser in north-east Tanzania:

It is most important that the dispenser should be able to explain to the people... the difference between Christian medicine and witchcraft, and wherever possible to explain the reason for any particular treatment... (The people) appreciate one of their own race, and they have said to me 'A European is a European, and they cannot explain all our miseries, will you explain for me?' [87].

It was not until the 1940s that the break-through began. Some well-qualified school boys were sent off to Minaki secondary school for training as certified dispensers; meanwhile training courses for African women nurses got under way in Masasi itself. With these young women available to replace the *jamaa* in tending the sick, it was proclaimed in 1943 that Lulindi was "gradually becoming more and more of a real hospital and less a sick camp in the bush" [88].

By the late 1940s a euphoric expectation began to possess the medical missionaries. Even after marriage, it was claimed, the influence of the African nurses "should be very far reaching and a big contribution to the enlightenment of the masses"; they would form "the nucleus of an infant public health service" [89, 90].

Only Africans can be got in sufficient numbers to reach the remoter villages so that in all parts of the country the standard of living can be raised by teaching the people hygiene... only they can teach their own people to notice the earliest signs of illness... Only they can show the people that rules of health and methods of treatment are universal and suited to all people and are not just a custom or idea of Europeans unsuited to Africans [90].

African medical assistants in Masasi, it was claimed in October 1944, could:

do much more than we can do to break down superstitions. They can explain things so much better in their own language than ever we can. It will be some time before the idea of being (bewitched) dies out, but it does help to make a difference to them if it is explained why certain things happen [91].

In short, the unsatisfactory and ambivalent teachers and clergy were to be replaced as scientific missionaries by this new wave of medical cadres. A true conversion to European medicine was about to commence.

Not surprisingly, the African clergy and teachers viewed the African medical assistants very much as youngsters who were to be kept firmly in their place. Old African priests like Reuben Namalowe and Obed Kasembe ruled their parishes like benevolent despots. Namalowe urged Dr Taylor to set up clinics first at his parish of Nanyindwa and thereafter at his new parish of Kamundi; his log-book is full of references to the visits of the doctors; but he is remembered for putting the African dispensers through their paces like a veritable sergeant-major [92]. Old Obed Kasembe visited Lulindi in 1943 after 36 years absence and saw the nursing course in progress. "I was amazed... I was astonished to see six girls of this diocese doing such work... My heart was filled with joy and pride." But he was careful to remind the girls when he presented their certificates that "these advances could not have been made if we elders had not worked hard so that we could make progress" [93]. The African Canons were not prepared to take interference even from the European doctors themselves. Dr Taylor became unpopular with them; they regarded her as impatient, unready to listen to African advice. In 1940 they asked the Bishop that she not be invited back to the diocese.

Indeed, right up to the end of her long service with the mission, Dr Taylor had to accept the determination of the African clergy to exercise authority over the medical staff posted to their parishes. In June 1960, for example, Father Edward Bushiri recorded in the Chitwata log-book:

After Mass I met five people and discussed their complaints about the Chidya dressers. The villagers wrote to Dr Taylor explaining their complaints about the dressers. Dr Taylor asked me to investigate the matter and find out whether the complaints are true. It looks as if they are not satisfied with how the dressers treat the patients. Therefore

the villagers want them to be transferred and others to be brought to Chidya [95].

In April 1962:

the Chidya hospital staff came accompanied by the councillors of the area and the *Jumbe* (headman) to explain about the complaints of the patients concerning their job—(a) drinking, (b) dismissing the patients without examining them properly.... I gave them a very strong warning.... They should know that the most important thing about their job is kindness [95, 2 April 1962 entry].

It was not surprising that a number of the mission African medical staff left to join Government service.

These tensions were mirrored in the relations of the European medical staff with the white missionaries, and particularly with Bishop Lucas. Archdeacon Le Fleming went so far in 1944 as to report to head office that "relations between the bishop and the doctors are, at times, rather strained. One European priest has dubbed them 'the medical gestapo', and I think that all the European non-medical staff would be delighted if the bishop would take a firmer line in dealing with them" [96]. Nor were these strained relations merely a result of the irritabilities of mission life. From the beginning of his episcopate Lucas and the doctors were in total disagreement over the central plank of his policy of adaptation—the Christianized initiation ceremony [97].

THE DOCTORS AND THE INITIATION RITES

The master-stroke of Lucas' adaptation policy was his capture of the *Jando* initiation and circumcision ceremony for boys. His Christian version remained a communal rite, taking place out in the bush and involving ordeals and "tribal" instruction, but it was purged of offensive 'heathen' elements and firmly controlled by African clergy and teachers. The doctors, for their part, objected to the continued use of 'traditional' circumcisers, the dirty conditions in which the operation was carried out, and the general health risks of concentrating boys together at times of epidemic. "The circumcisions were carried out in completely primitive and barbaric fashion, the boys lying in the dust surrounded by a howling, yelling mob", wrote Leader Stirling. "I attended a number of these circumcisions but found the conditions utterly impossible for applying any useful treatment.... The problem was made much more difficult by the fact that the Mission had given its blessing to these ceremonies... and the mission hospital was expected to give full support" [6, p. 48].

Soon after Dr Taylor's arrival in 1926 Lucas' first and only Synod took place. A medical committee was appointed and duly reported that *Jando* circumcision should be abolished. Lucas vetoed the report. Dr Stirling arrived in 1935. For five years he tried to clean up the *Jandos*; in 1940 he submitted a report urging that all boys go to hospital for circumcision. Lucas' "only comment was that when I had been in the mission rather longer I might see things differently" [6, p. 48].

In his determination to persist with communal circumcision Lucas was reflecting the whole philosophy of Indirect Rule as well as of adaptation. In 1928, for example, the Provincial Commissioner, Turnbull, had

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rebutted criticisms of circumcision within the initiation rites from the Director of Medical and Sanitary Services in Dar es Salaam by asserting that "natives have practised it for generations and it is obvious that were it attended by the dangers... (postulated)... the system would have broken down. Native physicians are not all fools or rogues, they have excellent remedies and forms of treatment". Turnbull added that he admired Lucas' wisdom in seeking to "retain all that is sound in tribal initiation". He would lend no support to "extraneous influences which sought to destroy tribal and parental discipline without which native society in its present stage cannot hope to progress on sound lines" [98]. This chimed well enough with Lucas' wish to find a way of reconciling African and European ideas of medicine—but to the doctors it seemed like a perverse protection of all the forces in Masasi society which resisted the triumph of Western science.

For their part, the clergy who supported Lucas believed the doctors to be at fault in ignoring all sociological considerations. "They were gravely at fault," says Canon Lamburn, "and set us back a very long time" [94]. "The medical staff were dead set against *Jandos*. The opinions of the medical staff took the narrow line that it was contrary to the Hippocratic oath for a doctor to assist in any way an operation performed by an unqualified person" [99]. The medical dangers had been over-stated:

Bishop Lucas had had more experience of these rites than perhaps any man living, and he declared that he had never known a single boy to die as a result of the operation as performed by an African operator in the dirt and filth of the forest. (God) has given parents the right and duty of bringing up their children [100].

African parents felt that a hospital circumcision was: so far removed from all their traditions that they would not accept it as an initiation rite at all... The secret could not be kept if the candidates went to hospital. More important still, how were the boys to be taught good manners? These are arguments not lightly to be put aside [100].

African mission staff were polarized on the issue. Some of the African medical assistants made a point of sending their sons to hospital for circumcision "as converts to science"; African teachers and clergy took pride in their sons being circumcised among their *jamaa*, as they said Christ Himself was circumcised [101].

So the *Jandos* remained a battle-field and often a humiliating one for the mission doctors. Two log-book entries suffice to make the point. The first comes from Lulindi where one of the two main mission hospitals was situated. In 1942 Harry Dennis, the priest in charge, persuaded the parents of 17 boys to have them circumcized by Stirling and his assistants outside the *Jando* rite. But the attempt failed:

The boys were anaesthetised first with novakane but either it was insufficient or else the boys were frightened—a little of both perhaps—for the screaming in some cases was dreadful. I had hoped that this might be the beginning of getting a cleaner and better *Jando* going... but I fear we have rather destroyed our chances for some time to come [102].

The second comes from Masasi, where the other main mission hospital was based and where in August

1944 Dr Taylor circumcized 7 boys in hospital. The log entry for August 27th reads:

After Mass *Mwenye Machinga* called the *Wakuu* of the Church and local *wazee* to protest about the hospital circumcision which had been taking place here. He objects to the operation being done by a woman and the whole feeling of the meeting was with him. I explained that I could do nothing to interfere in hospital matters and that if the parents wished to take their children to Dr Taylor nobody could stop them. They are quite prepared for hospital circumcision if done by a man but even so would prefer them done on the hill so that the customs of the *Jando* may be carried out [103].

THE CHURCH AND THE PROBLEM OF SPIRITUAL HEALING

In this controversy the perspectives of modern medical anthropology might incline us to be sympathetic to the position of the clerics rather than the doctors. The medical approach certainly was highly individualistic, while the churchmen stressed community. But having said so much about the ambiguities of the medical position we need to close by confronting a central ambiguity of the clerical position. The churchmen were saying that a purely technical medical approach was not enough; they were saying that some way had to be found of relating Christian healing to African healing. But they completely failed to respond to the African demand upon them for spiritual healing. Despite all their reservations by this time about the position of the doctors, the clergy was nevertheless left offering only the hospital and the clinic as the contemporary fulfilment of the healing mission of Christ.

This outcome was in many ways odd. The U.M.C.A. was a child of the Anglo-Catholic movement, which had done more than anyone else to revive interest in spiritual healing within the nineteenth century Church of England [104]. It strongly emphasized the sacraments, which Africans persistently invested with healing power. Time and time again its bishops came slowly to the conclusion that *maybe* in Africa the church ought to make use of exorcism, or the sacrament of unction, or the laying on of hands. As we have seen, the terrible cases of faithful teachers and clergy breaking down under the strain of witchcraft fear prompted some European clergy to argue that this spiritual evil must be contested with spiritual weapons. And all the time African Christians were pressing in upon the mission for healing—investing this or that priest with the power to heal by touch, relying on baptism and communion for their power to cure. Yet little or nothing was ever done.

Looking back on his career as doctor and bishop, Hine recounted in 1924 a number of cases in which his episcopal touch had healed people, though without any conscious intention so to do on his part. He concluded:

We may ask is it right to follow ancient usages—exorcism, unction—for those who are as they themselves may think possessed of devils, or beyond the reach of medical skill? Is it that in primitive tribes and lands beyond reach of civilization we come more closely into touch with those spiritual powers in which the ancient Church so fully believed? [105].

Frank Weston, Hine's successor as Bishop of Zanzibar, went further than speculation. Weston believed that the 'spiritual evil' of witchcraft "could only be met by spiritual weapons"; he believed in the reality of demonic possession. So "he issued careful regulations to his diocese. No one was to be presumed to exorcise but after prayer and fasting, confession and communion. The priest, or other exorcist, may not go to a possessed person alone, but accompanied by devout Christians" [106]. I have come across no evidence, however, to suggest that in Masasi district these regulations were ever put into effect—save for the one instance of Lucas' uneasy attempt to exorcise Benedict Njewa. The idea of spiritual healing was so little developed in Masasi that one of Lucas' successors as bishop of Masasi, Leslie Stradling, could still write in 1960 in terms as tentative as Hine's and still place upon the doctors the weight of carrying out Christ's ministry of healing:

A Christian hospital is not a bait to catch converts, nor an institution that will so impress patients that they ask to become Christians. . . . Whether or not the hospital brings in any converts we cannot . . . refuse to show to our people the love and sympathy of Christ. In this we are following his own example in Palestine, for he did not use his miracles of healing as a means of winning disciples. On the contrary, he often tried to keep his miracles secret, and wished people to come to him for his own sake, without being drawn by signs and wonders.

On St Luke's Day, when we were thinking of the healing power of the Divine Physician, I was trying to explain all this to a large congregation in church. I said that, although Christ was no longer visible in his human body after the Ascension, yet we see him still working the same works through his universal body, the church. In the Acts of the Apostles we find St Peter and St Paul and others, preaching to great crowds, healing the sick, raising the dead, guiding the conduct of Christians; yet it is really our Lord himself who is working through these people. So today the same miracles of healing are performed here, but they are done through the doctors and nurses and their God-given skill. In the Mission hospital here, across the road, it is Christ himself who is healing the sick [107].

Yet Stradling wondered, "is this enough? Are we making sufficient use of what is specifically known as spiritual healing?" The church might use unction for the sick; it might institute regular prayers for healing. There was, of course, exorcism—and "though psychosomatic healing has not yet been fully explored, it is difficult for a Christian to argue that our Lord was wrong and that there is no such thing as spirit possession". And there was the laying on of hands. "In England", wrote Stradling, "a great deal of thought is now being given to this matter, but the whole subject has been befogged by quack-healers who often do much harm. . . . In our general uncertainty and ignorance at this time we have to walk carefully: but perhaps we walk too carefully" 107, pp. 91–2].

This protracted 'uncertainty and ignorance' in Masasi was all the more remarkable in that the Church of England had been discussing spiritual healing since the Lambeth Conference of 1908 and that a committee of the Conference had published *The Ministry of Healing* in 1924 [104]. *Central Africa* sometimes showed awareness of this debate—as in October 1924 when it hailed "the most interesting and inspiring accounts given of the Mission of Spiritual Healing

in South Africa" [108]. But what is most striking about the recent historical accounts of the development of the spiritual healing movement within the Church of England is that the missionary dimension seem hardly to have been considered [108]. Bishops in East Africa might speculate that the 'spiritual powers' of the ancient Church were especially appropriate there; but in practice spiritual healing was much more extensively employed in England right up to the 1960s than it was in Africa.

This was not really the result of a hard-line insistence on exclusively material and scientific medicine by the mission doctors. Frances Taylor attributed her success in operations undertaken when she was tired beyond endurance to the fact that "my Guardian Angel had taken charge" [20]. Leader Stirling developed a devotion to Therese of Lisieux during one of the Masasi retreats:

In the middle of the retreat, I was suddenly called to the hospital and found a child who have been brought in choking. I saw at once that he . . . was dying of aphasia. . . . But this time I had a new weapon. Desperately I called on St Therese, 'Pray for the child'. Immediately, breathing began again, quiet and regular. St Therese has been my great friend ever since [6, p. 81].

The bishops wondered; the doctors were open to the idea of spiritual intervention; meanwhile the African Christians insisted on regarding the church as an agency of healing whether the missionaries liked it or not. Certain missionaries acquired a popular reputation for healing power—unknown to him people used to crowd round Bishop Lucas to receive his blessing and so to be cured [94]. *Jamaa* carried their sick to receive baptism or communion. The atmosphere of this African church was usually not expressed in written statements for European eyes but rather acted out. Still, we have one fascinating document which brings the world of African Christian therapy vividly to life. In his extreme old age, Kolumba Msigala, one of the African Canons on whom Lucas had so heavily relied, wrote in Swahili his *Reminiscences of the history of Masasi*. Unashamedly the old Canon described a world of spiritual healing.

Msigala described a journey on the Makonde plateau in the 1890s during which he cured a youth bitten by a *songo* snake. Msigala records himself as replying to his European companion's expressions of astonishment:

My father was a native Doctor, not a witch doctor, and he was a true Christian. I have inherited his work but I don't practise it now because I feel my vocation is to teach religion. When the natives are in trouble and need native medicines, I help them. This is our mode of life when we are left to our own devices [109].

But he plainly did not feel that in choosing to 'teach religion' he had in any sense left the field of healing. He described a journey made with Bishop Smythies in 1886 during which chief Liwengwa was converted and received baptism at the age of 90. Msigala plainly shared the old chief's belief that he had found spiritual healing:

Oh, what a terrible state the old man was in! He was very ill, almost at the point of death. . . . The Bishop came in and found him on his bed troubling and asked him in a loud voice 'What is troubling you?' He answered in a low voice

which could just be heard. 'I want your medicine.' The Bishop answered 'Which?', and showing his episcopal cross which he was wearing said 'This will do you good if you believe in God.' Chief Liwengwa said 'Give it me, give it me, please; I believe in God.' The Bishop gave him another quite big cross and put on him the emblem of a catechumen. Next morning he could speak quite well and asked for baptism, saying 'I have heard at Masasi where you come from that people are sprinkled with water three times and recover from their ills, and afterwards go on wearing this sign, abstaining from drink and heathen worship and polygamy. This is what I want and I shall be able to do this' [109, p. 87].

Msiagala also recorded the healing power of Canon Porter:

I remember that during his life this father performed a wonder—perhaps a miracle. One day I was walking with him on parochial work when he saw a child, called Karowanga, a chronic invalid. He washed his sores, but had no bandage, so he said 'Haven't we a purificator in church? Let us bind up this child.' By chance we had some suitable ones and he split these and bound the wounds of the child with them with medicine. For a time he prayed without uncovering them. When he uncovered them he was quite healed and his arm which had been bent was quite straight. The child was converted by this deed [109, p. 106].

It was not surprising that at Christmas 1912 Lucas found that groups of Christians whom he had expected to be admiring the new crib were in fact making supplications at Porter's tomb [110].

One might have expected that Lucas could have found here the point of contact he was seeking between African and European ideas of healing. But in fact the missionaries devoted a great deal of their time and energy to refuting African Christian ideas about the healing power of the sacraments and the miracles of living holy men. "I preached on the right use of medicines," recorded Canon Faussett in the Masasi log-book in October 1934, "and of the sacraments as against the idea held by some people that Baptism is a charm for curing ills for which people have neglected to seek medical aid, also to counteract the idea that sick people can be baptized whatever their moral state" [69, 20 Oct. 1934 entry]. Bishop Alston May of Northern Rhodesia told his confirmation class at Chipili in 1921:

Now listen, the strength of Confirmation is not a new kind of 'medicine'. Understand this well.... Perhaps some Christians say in their hearts 'I have refused the bad medicine of the heathen; now I will use the good medicine of the Christians. I want to resist Satan; therefore I will get the medicine of Confirmation and Communion, and the strength of God will keep away Satan.' They are wrong altogether.... It is not medicine that you receive in Confirmation. God the Holy Ghost comes into your heart to help you drive Satan away yourself [111].

It turned out that the high church tradition of the U.M.C.A. made the missionaries less rather than more ready to adopt what a recent Anglican writer maintains is the true view that Communion is the essential sacrament of healing. The U.M.C.A. missionaries were under constant criticism from their supporters in England for ritual practices which were believed to be dangerously close to Roman Catholicism. "Almost all the clergy seem to be of the ultraritualistic party", wrote a critic, "and to regard the

unfortunate African as an appropriate 'corpus vile' for the latest fashion of revived medievalism—fumigations, aspersions, processions, masses, compulsory confessions, etc" [112]. The robust Hine found Anglicanism in Zanzibar, with its rosary prayers and the veneration of the Sacrament in Benediction, full of "effeminate teaching and practices such as hysterical emotional females hanker after, but which is contrary to the robust common-sense of the ordinary English churchman" [113]. Duncan Travers, the secretary of the U.M.C.A. in London, invoked the authority of one of the Cowley fathers—those venerated figures of high Anglicanism—against a dangerous and excessive use of ritual in Africa. Wrote Father Puller:

To my mind, it is most deplorable that the cultus of images and the invocation of the Saints should be instilled into the minds and affections of the infant church of Zanzibar. I consider that practices of that sort are dangerous among European Christians, but they are tenfold more dangerous among newly converted African natives [114].

Time and time again the U.M.C.A. missionaries had to defend themselves against the charge that they were leading their converts into a 'magical' view of Christianity.

They accordingly went to great lengths to insist that their sacramental Anglicanism was a religion of freely and fully willed choice of and association with Christ. Bishop Steere, so Chauncy Maples wrote after his death:

was of opinion that there was a danger lest many fervent in the adoration of the Holy Eucharist should incline to the error of directing their worship rather to the Presence of our Blessed Lord than to His Person. He feared lest some might even be led to adoration of *Res Sacramenti* and to substitute it for that adoration of the Person of the Divine Master in heaven, to which this mysterious Presence in the sacred elements is intended to lead us [115].

All this inhibited the U.M.C.A. in Masasi from developing a theology of healing which combined a call to repentance with belief in the direct spiritual power of Christ through the sacraments or through the preacher and teacher. Such a theology arose after Tanzanian independence and the transition from a missionary to national church, when Edmund John carried out his extraordinary charismatic ministry of exorcism and healing at Masasi Cathedral [116–118]. But during the missionary period, healing was left to the doctors—with the single exception of the inaugural blessing of new hospital and clinic buildings. Thus in 1939 Stirling described the opening of the new out-patient block at Lulindi:

The Bishop went all round the building, both outside and in, sprinkling holy water. Then standing in the doorway, he said the traditional prayers, exorcizing any evil spirit and praying for God's blessing on the building... finally placing it under the special protection of St Michael the Archangel. The people here go in constant fear of evil spirits and witches, and even when they become Christians it is one of the hardest things for them to overcome and to realize that the Holy Spirit is stronger than all. So to know that a house has been solemnly blessed in the name of Almighty God, and that therefore no evil spirit can enter in is to give a great increase of confidence [64, p. 38].

It was something—but it was not nearly enough to meet the hunger for spiritual healing in Masasi.

CONCLUSION

It seems clear that the initial high expectations of the effect of medical missionary work had not been realised by 1945. Western medicine had not scored the expected triumphs over disease; its ideological assumptions had not undermined African notions of causality. On the other hand, Lucas' policy of adaptation had not come close to Christianizing African concepts of medicine and healing. Together with the resentment which many African church employees felt at salary reductions during the 1930s, the unappeased desire for spiritual healing produced the sort of atmosphere which elsewhere in Africa gave rise to independent churches. This did not happen in Masasi where the omnipresence of Islam and the abundance of prophetic healing movements appears to have ensured an adequately plural therapeutic environment [119]. The U.M.C.A. was given a second chance to develop an adequate medical policy after the second world war. After 1945 both the old ecclesiastical and the old medical assumptions were abandoned. Lucas' adaptation theory now seemed inert and reactionary; the watchword was now 'development'. For the doctors the emphasis moved from the individual patient in the hospital and towards community medicine, vitamins, family, welfare, preventive medicine. There was a renewed and much more determined attempt to carry European medical ideas into African society. Whether or not this second attempt was any more successful remains for me an open question until I can do the same sort of intensive research for the later period which my sources have allowed for the earlier.

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1. This paper is based largely on four categories of evidence. The Universities Mission to Central Africa (U.M.C.A.) published a monthly, *Central Africa*. The tensions among the missionaries were censored out of the magazine, but it provides very useful evidence for mission ideology. The earlier years of the magazine were filled with evangelical triumphs and disasters, but medical expansion constituted the new 'pioneer' achievement of the 1920s and 1930s and was given much space. The United Society for the Propagation of the Gospel, Tufton Street, Westminster has inherited the U.M.C.A. archives, in which there is to be found a great mass of missionary correspondence. In Tanzania itself the main source is provided by the log-book diaries which each U.M.C.A. priest, catechist, and teacher was obliged to keep. Some 200 of these diaries from the Masasi diocese, kept in English and Swahili, are now in the library of the University of Dar es Salaam. They provide remarkable and detailed material on conceptual interaction. Finally, I carried out a number of interviews with doctors, nurses, clergy, teachers and clan heads in or from the Masasi area.
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III (b) SPECIAL THEORIES OF CAUSATION, CLASSIFICATION AND THOUGHT

MODELES ET PRAGMATIQUE, ACTIVATION ET REPETITION: REFLEXIONS SUR LA CAUSALITE DE LA MALADIE CHEZ LES SENOULO DE COTE D'IVOIRE

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Résumé—La distinction entre causalité *a priori* et causalité *a posteriori* est une condition méthodologique nécessaire de l'analyse des énoncés explicatifs de la maladie. La première partie, consacrée aux modes de la causalité *a priori*, décrit non pas une 'taxinomie' médicale senoufo, entreprise absurde, mais les types formels de connexions posés soit comme nécessaires soit comme possibles entre un symptôme et les trois éléments constitutifs de la configuration causale: cause, agent et origine. On souligne l'hétérogénéité entre la logique des 'codages' *a priori* et les élaborations pragmatiques *a posteriori*. On s'interroge aussi sur la raison d'être d'une telle hétérogénéité.

La deuxième partie montre que les conduites et les institutions thérapeutiques senoufo fonctionnent de manière étanche et autonome par rapport à celles du registre interprétatif: ainsi l'introduction de nouvelles alternatives thérapeutiques (notamment islamiques ou biomédicales) n'entraîne pas nécessairement la modification de la pensée causale. En outre, la conception de la libre commutabilité des causes avancée par R. Horton est critiquée en raison du caractère flou de la notion de 'remedial prescription' et de la non-distinction entre les trois éléments de la configuration causale.

Enfin, l'article cherche à dégager le principe de cohérence qui rend compte tant de la diversité des modèles explicatifs *a priori* et des pratiques divinatoires et thérapeutiques observées que de la clôture du champ étiologique par rapport aux systèmes extérieurs. L'analyse de l'institution complexe du sādoho permet d'affirmer que: (1) l'événement-maladie est conçu comme la réactivation d'un événement antérieur: il est immédiatement réinscrit et stocké dans la mémoire collective du matrilignage; (2) le dispositif divinatoire a fonction de réalimenter cette mémoire avec ses propres schémas (instances et mémoriaux) constitutifs; (3) l'initiation au sādoho, qui consiste à réactualiser et à transférer tous les facteurs (préinscrits et stockés) de maladie sur un devin potentiel du matrilignage, illustre une conception générale de la causalité fondée sur le principe de la répétition. Ce qui permet de comprendre quelques traits spécifiques du pluralisme médical chez les Senoufo.

Abstract—The distinction between *a priori* and *a posteriori* causality is a necessary methodological precondition for the analysis of explanatory assertions about sickness. Part one, on *a priori* causality, will not undertake a somewhat absurd reconstruction of a Senoufo medical 'taxonomy', it will rather describe the formal types of connections, necessary or possible, between a symptom and the three elements of its causal configuration: cause, agent, and origin. It is to be emphasized that there is a great heterogeneity between the logic of *a priori* 'codes' and pragmatic *a posteriori* elaborations. What is the reason for such a heterogeneity?

The second section shows that Senoufo therapeutic behaviours and institutions function in a closed and autonomous manner in relation to the interpretive register: the introduction of new therapeutic alternatives (notably Islamic or biomedical) do not necessarily lead to a change in causal thought. Furthermore, R. Horton's conception of cause switching in West African medical thought must be criticized because of the inadequacy of the related notion of 'remedial prescription' and his lack of distinction between cause, agent, and origin.

Finally, an effort is made to separate out the principle of coherence which accounts as much for the diversity of *a priori* explanatory models and observed divinatory and therapeutic practices, as for the closure of the etiological field in relation to external systems. The analysis of the complex institution of sādoho leads to the conclusion that: (1) the sickness event is conceived as the reactivation of an earlier event; it is immediately reinserted and stored in the collective memory of the matrilineage; (2) the divinatory device has the function of feeding this memory with its proper constituent instances and recollections; (3) initiation to sādoho, which reactualizes and transfers all previously registered and stored sickness etiologies upon a potential diviner of the matrilineage, illustrates the general conception of causality based on the principle of repetition. This permits an understanding of several traits peculiar to the medical pluralism of the Senoufo.

LEXIQUE

<i>dēz</i> (wi)	sorcier—pluriel: <i>dēbēlē</i>
<i>fw̄r̄r̄</i> (dī)	souillure
<i>kān̄h̄n̄</i> (lī)	présage
<i>kātyēnē</i> (lī)	objet-fétiche (impliquant l'idée de petitesse)
<i>māndēn̄</i> (wi)	génie
<i>nākāz̄</i> (wi)	génie (<i>nafara</i>)—pluriel: <i>nākāh̄bēlē</i>
<i>nīnīgēf̄l̄</i> (wi)	esprit gardien (<i>nīnīgē</i> : faire sortir; <i>f̄l̄</i> : possesseur)
<i>nūmā</i> (wi)	force libérée par tout être vivant après la mort
<i>ṇāmbēlē</i> (bē)	jumeaux
<i>sādhō</i> (gi)	(1) puissance du matrilignage; (2) institution initiatique
<i>sādhōbēlē</i>	initié(e)s au <i>sādhō</i> , au sens restreint devins
<i>sādhō n̄n̄/tyā</i>	homme/femme support de la puissance <i>sādhō</i> , le cas échéant, devin (<i>sādhō</i> , sans spécification du sexe)
<i>tyēfūrō</i> (dī)	corps chaud, fièvre (<i>tyērē</i> : corps; <i>fu</i> : racine dénotant l'idée de chaleur)
<i>p̄r̄</i> (dī)	terme générique pour initiation, au sens restreint initiation masculine
<i>yāfūgō</i> (gi)	interdit (<i>yārgā</i> : chose; <i>fūṅ</i> : ne pas faire, voir etc. . .)
<i>yāsūṅgō</i> (gi)	objet-fétiche (<i>yārgā</i> : chose; <i>sūṅ</i> : sacrifice)
<i>yāsūṅgof̄l̄</i>	'possesseur de fétiche'
<i>yāwīgē</i> (gi)	agent, animal ou humain, qui 'poursuit' les descendants de ceux qui ont été en contact avec lui (<i>yārgā</i> : chose; <i>wi</i> : poursuivre)
<i>yādmā</i> (bi)	maladie
<i>yāpērē</i> (dī)	payement au <i>sādhō</i> lignager de la partenaire sexuelle (<i>yārgā</i> : chose; <i>pē</i> : balayer)
<i>wārā</i> ou <i>wērē</i> (dī)	feuille; par extension 'médicament'

INTRODUCTION

La nécessité de distinguer cause instrumentale, cause efficiente et cause ultime de la maladie s'est peu à peu imposée aux anthropologues [1-4]. C'est par souci de clarté que nous adopterons ici une autre terminologie. Si l'on rassemble tous les cas de figure, le diagnostic de la maladie comporte au plus quatre opérations: la reconnaissance de l'état de maladie et son éventuelle nomination: de quelle maladie s'agit-il? La perception ou seulement la représentation de sa cause instrumentale: comment est-elle

survenue? L'identification de l'agent qui en est responsable: *qui* ou *quoi* l'a produite? La reconstitution de son origine: *pourquoi* est-elle survenue en ce moment et chez cet individu? Dans notre terminologie, la cause est donc le *moyen* ou le *mécanisme*—empirique ou non—de l'engendrement de la maladie. L'agent est ce qui détient la *force efficace* qui la produit. L'origine est la conjoncture ou l'événement dont la constatation ou la reconstitution rendent intelligible l'irruption de la maladie dans la vie des individus (Table 1).

Ces définitions esquissées, notons que toute réflexion sur la causalité en médecine africaine se nourrit de deux corps d'informations épistémologiquement hétérogènes. Le premier est un ensemble d'énoncés *a priori* sur les connexions nécessaires (ou hypothétiques) entre le symptôme ou la maladie et les trois autres termes qui figurent dans le tableau ci-dessous. Le concept d'*a priori* renvoie ici à deux états de choses distincts. Lorsque l'ethnographe interroge son informateur sur les représentations de sa société, il le situe—et par là même il se situe—dans la position objectivante du sujet indéfini. Le Senoufo, le 'on' qui lui parle au nom de sa catégorie sociale ou de sa culture, est invité à transformer en données *a priori* toute une série d'énoncés étiologiques qu'il a mémorisés au fil de ses expériences singulières, soit en tant que malade ou thérapeute, soit en tant que partenaire actif d'épisodes de maladie ou d'une relation d'apprentissage thérapeutique. Par ailleurs, sa société n'a pas attendu l'ethnographe pour établir des schèmes de causalité *a priori*, inégalement diffusés. Il en résulte qu'au premier abord, l'inventaire des catégories explicatives ressemble davantage à un bric-à-brac qu'à une 'taxinomie'.

Le second corps d'informations est un ensemble d'*élaborations a posteriori* suscitées par l'irruption de la maladie à des moments donnés, dans des contextes sociaux donnés. Dans cette perspective complémentaire de la précédente, le principe de cohérence est à rechercher dans l'enchaînement séquentiel des segments d'interprétation et des recours thérapeutiques. Les énoncés doivent être alors rapportés à leurs conditions d'énonciation, autrement dit aux conjonctures pragmatiques, subjectives et socio-symboliques qui leur confèrent un sens contextuel dans le déroulement problématique des épisodes de maladie. Causalité *a priori* et causalité *a posteriori* ne sont pas congruentes: nous chercherons à montrer que chez les Senoufo, certaines connexions établies par la première interviennent activement dans les processus interprétatifs de la seconde, mais que cette dernière seule rend intelligibles les étiologies *a priori*.

Table 1. Modèle ou configuration explicative

Maladie	Cause	Agent	Origine
Quelle maladie?	Comment?	Qui ou quoi?	Pourquoi?
Symptôme	Moyen, Mécanisme	Force efficiente	Événements
Taxinomie			Conjonctures
Terminologies courantes	Cause instrumentale (immédiate)	Cause efficiente	Cause ultime (finale)

Le contexte ethnographique

Les Senoufo [5], plus précisément les groupes Nafara, Fodonon, Kouflo, Forgerons dont nous parlerons ici occupent le nord de la Côte d'Ivoire. Grands cultivateurs, leur organisation socio-religieuse est caractérisée par une forte accentuation matrilineaire, par la prégnance d'une institution initiatique masculine, secrète, le *poro*, et par l'importance du culte des ancêtres et des rites funéraires. Le principe de séniorité, qui régit à tous les niveaux (village, groupe de descendance, classe d'âge, etc.) les relations de subordination, est au fondement de l'exercice de l'autorité. S'il fallait qualifier l'éthos de ces groupes exposés de longue date aux agressions répétées de leurs voisins septentrionaux, nous dirions—et telle est leur réputation—qu'il s'agit de sociétés conservatrices et fermées.

La maladie

L'éthique de l'endurance, repérable tant dans les comportements quotidiens que dans la valorisation initiatique de la souffrance, est un premier élément significatif de la conception senoufo de la maladie. L'état de maladie/*yaama* s'oppose à celui de la 'fraicheur du corps' *tyerenyimē* (*tyere*: corps; *nyimē*: fraîcheur, ombre). Le couple maladie/santé se distingue lexicalement de celui de chance, bonheur/malchance, malheur (*yēfīge/yēwuw*, soit figure blanche/figure noire). Santé et maladie réfèrent ainsi à une échelle de températures, tandis que bonheur et malheur renvoient davantage à un spectre de couleurs [6].

Comme ailleurs, maladie et malheur ne sont pas toujours différenciés: par exemple, le terme *ɔɔɔ* désigne l'état, voire le mode d'existence d'un individu sur qui l'un et l'autre s'abattent en série. La répétition en elle-même marque un changement d'état, où les troubles cessent d'être de simples événements pour devenir les signes d'une prédisposition—qui précisément se distingue de *nari*, le mal ou le malheur qui affligent ponctuellement un individu ou un groupe.

Ces couples qualitatifs se manifestent également dans quelques expressions désignant des symptômes très fréquents: ainsi, la fièvre peut être nommée *tyefuro*, le 'corps chaud', mais aussi *nyimē*, l'humidité, ou *weere*, le froid (lorsqu'elle s'accompagne de maux de ventre et de vomissements). Sur un mode bien connu, un même syndrome biomédical peut être distribué en *yaama* différents, des symptômes différents peuvent être rassemblés en une entité nosologique unique. En dehors des maux courants, la reconnaissance et l'aptitude à désigner une maladie sont du ressort d'individus plus ou moins spécialistes. Le profane désigne souvent la partie du corps où se localise le trouble: *nyūgo mii yaa/j'ai mal à la tête* (ma tête est malade), etc.

La taxinomie comporte des termes simples ou composés:

—Expressions simples: par exemple, *gāguoli*/la toux; *nāmigi*/la plaie; *kotige*/la côte (dans l'occurrence: 'mal aux côtes', pneumopathie); *kakōgi*/le rhume; *gōgi*/la gorge (le goître); *zāāni*/l'épilepsie; *mōrigi*/le kyste, etc.

—Expressions composées: *yaanunom*/maladie du

sommeil (*hunō*: dormir, être endormi); *nyōforigi*/bouche écorchée (*nyōgi*: la bouche; *fori*: écorché; ulcérations buccales, peut-être avitaminose); *gāguofili*/toux blanche (*fii*/blanc; peut-être un stade de la tuberculose); *laaferi*/la course du ventre (*laagi*: ventre, estomac; *fā*: courir: la diarrhée); *fūgo nāmigi*/plaie de l'intérieur (*fūgo*: intérieur; dysenterie, colite hémorragique, amibiase?); *tyewaari*/corps sec (*tyere*: corps, *waa*: sec; amaigrissement avec anorexie); *kubawugi*/taches noires (*kubau*/taches sur le pelage des chiens ou des chats; *wuo*/noir; dues au grattage lors de la première phase de l'onchocercose); *kubafugi*/taches blanches (lésions blanches dues au grattage—stade de l'onchocercose; aucun lien avec la cécité n'est posé localement).

MODELES EXPLICATIFS

Dressé dans les conditions d'énonciations de l'enquête ethnographique, l'inventaire étiologique senoufo présente de nombreux traits communs avec d'autres systèmes médicaux africains. Une maladie ou plutôt un symptôme donné peut-être connecté *a priori* ou *a posteriori* aux catégories causales énumérées ci-dessous (Table 2).

Ce tableau qu'il convient de considérer comme un simple aide-mémoire répertoriant les catégories majeures, sera longuement explicité par la suite. Notons seulement ici que ce que nous appelons 'maladies naturelles' et ce que les Senoufo appellent 'maladies de Dieu' se distinguent en ceci: les premières rapportent le symptôme à un facteur empirique agissant sur le mode 'mécanique', alors que les secondes réunissent l'ensemble des conditions pathologiques auxquelles ni le sens commun, ni la divination n'ont pu assigner de cause hypothétique [7]. C'est donc une catégorie étiologique 'en négatif', car Dieu/*kulotyolō* est par ailleurs l'entité que les Senoufo considèrent comme l'origine ultime des choses du monde/*dulunya*—et par conséquent de toutes les maladies. 'Maladies de Dieu' a donc ici une signification nettement différente de celle que recouvre la même expression dans le monde bantou, en particulier dans le Bas-Zaïre où, comme l'a noté Janzen, les 'maladies de Dieu' s'opposent aux 'maladies de l'homme', qui réfèrent à la sorcellerie [8-9].

Soulignons en outre que la pensée étiologique senoufo ne privilégie ni les modèles d'agression mystique, ni ceux de sanction mystique. Son originalité consisterait plutôt—tel est l'argument de ce travail—en un *stockage* cumulatif, synchronique et diachronique, de causalités préexistantes et virtuelles, dont groupes et individus peuvent être les supports, et qui s'actualisent dans la maladie.

LES CAUSALITES A PRIORI

Ces traits généraux une fois évoqués, quelles sont les modalités des connexions que les Senoufo établissent *a priori* entre maladies (ou symptômes) et configurations causales (cause, agent, origine)? Avant de les analyser, soulignons que ces liaisons forment un ensemble fluctuant, étroitement dépendant du locuteur, et qui ne constitue en rien un corpus fixe,

Table 2. Catégories causales senoufo

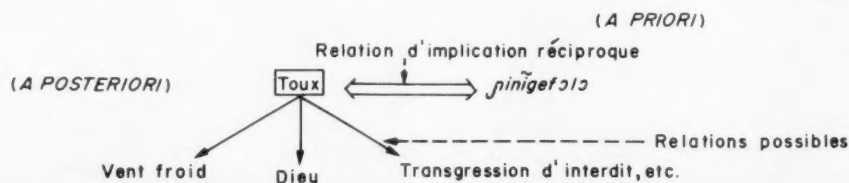
	Termes senoufo	Spécifications
Un facteur mécanique X	—	'Maladies naturelles'
Dieu ('maladies de Dieu')	<i>Kulotyɔlɔ</i>	Maladies sans autre cause assignable
Le <i>pûma</i> des animaux tués ou des personnes mortes en brousse	<i>yawige</i> (la chose qui poursuit)	Maladies contractées par contamination
La transgression d'interdits	<i>yafūgo</i>	Interdits liés au lignage, à l'individu (objets, statuts) etc
La magie instrumentale et les objets-fétiches	<i>yasūngo</i> <i>katyene</i> , etc.	} Maladies 'jetées' ou 'ramassées'
Les sorciers de matrilignage	<i>deɔ</i>	
Les génies de lieu (brousse, rivières, etc.)	<i>mādebele</i> , <i>tugobe</i> , <i>nakāhābele</i>	} Agents qui 'tombent' ou qui 'descendent' (<i>tigi</i>) sur l'individu
L'instance protectrice du matrilignage	<i>sādoho</i>	
Les morts du matrilignage	<i>kuubele</i>	
L'instance gardienne de l'individu	<i>pinigefɔlɔ</i>	
Les jumeaux du matrilignage	<i>qāmbele</i>	

ni un codage définitif. Il n'en demeure pas moins qu'elles présentent une série de constantes formelles.

Les connexions se manifestent d'emblée sous deux formes:—D'une part, un symptôme A est rapporté à une cause X par l'intermédiaire d'un couplage d'apparence biunivoque, s'exprimant comme nécessaire: relation d'implication réciproque [10].—D'autre part, un symptôme B est énoncé comme attribuable à l'un ou l'autre élément d'un faisceau de causes possibles—selon le modèle bien connu des 'séquences causales convergentes' [4, 11].

Ces deux formes se différencient donc sous un double aspect: (1) la nature même du lien causal (de

forme hypothétique ou non, soit du type: "si p, . . . alors q"); (2) la nécessité ou non de ce lien. Le problème réside dans le fait que les contenus des termes de la relation *per se* (A, B, X, etc.) ne permettent pas de caractériser la nature du lien causal: tel contenu (tel agent ou symptôme) peut figurer *a priori* tout autant comme terme d'une relation hypothétique, nécessaire, incertaine, etc. Par exemple, pour les Senoufo, la toux est aussi bien l'un des termes d'une relation d'implication réciproque avec l'esprit gardien (agent)/*pinigefɔlɔ* [12] de l'individu que d'une relation possible avec le vent froid ou d'autres causes. Soit le schéma suivant:



Ainsi, l'ensemble des connexions causales *a priori* peut être divisé en deux catégories: les relations nécessaires d'implication réciproque—ou couplages—et les relations possibles. Nous examinerons à présent les couplages *a priori* énoncés par les Senoufo—le principe organisateur des connexions possibles, relevant d'une analyse de la causalité *a posteriori*, sera explicité ultérieurement.

Les implications a priori

Selon la thèse désormais classique de Horton [11, p. 169], la pensée traditionnelle africaine ne pourrait

s'accommoder de l'élaboration de théories qui assignent un effet par trop distinctif à un antécédent—ou cause—particulier, ou à une configuration particulière d'antécédents. En reprenant notre terminologie analytique, cela signifierait que les Senoufo n'attribueraient pas des symptômes donnés à des causes, agents ou origines donnés. Ce n'est pas le cas—à tel point que l'interprétation fournie par la divination/*sādoho*, peut se borner à n'être qu'une pure corroboration des connexions établies *a priori* entre ces termes.

Il est important de noter que le sens de l'implica-

tion—soit que l'effet B conduise à l'antécédent A, ou que l'antécédent A induise l'effet B—ne fournit pas un critère distinctif pertinent: c'est l'existence même de couplages *a priori*, et non la direction de l'inférence—induction ou déduction coexistent tant dans l'*a priori* que dans l'*a posteriori*—qui permet de distinguer différents types de causalités. Ainsi peuvent coexister les deux séquences suivantes: cette maladie est due à tel antécédent; tel événement entraînera telle maladie. Circularité qui apparaîtra le plus nettement dans les connexions du type symptôme \leftrightarrow origine.

Symptôme \leftrightarrow cause

Soient pour commencer les couplages symptôme—cause où la liaison est de caractère 'mécaniste' ou 'déterministe'. Il n'est guère surprenant que figurent ici des troubles fréquents ou bénins. Par exemple, il est dit que *toho*/prurit aigu (dermatose) est dû au contact de la graine de l'arbre *bolongo* avec la peau. Ou bien, *finige*/la racine de l'urine (rétention urinaire) apparaît chez l'individu qui urine sur le son de riz. Dans ces exemples simples, où le modèle explicatif se réduit à une seule connexion, on remarque qu'il est difficile de disjoindre cause et origine (le comment et le pourquoi). On verra que celles-ci ne se différencient nettement que dans les cas où figurent toutes les connexions (entre symptôme, cause, agent, origine)—l'agent ayant précisément pour fonction de distribuer ces deux polarités.

Ou bien: il est dit que *binibali*/bâton à remuer les sauces posé en travers (*binige*: bâton à remuer les sauces; *bali*: poser à travers—l'angine) provient de l'habitude de cracher à côté d'excréments. Dans ce cas, la représentation de la cause n'entretient aucun lien avec la métaphore qui sert à désigner les troubles (difficulté à déglutir *comme si* on avait le bâton *binige* dans la gorge). La liaison symptôme—cause n'est pas en elle-même de nature métaphorique.

Ou bien: *nūfūdāhāri*/vers rouges (athlete's foot avec ulcérations) est contracté par un individu qui marche sur les vers rouges du même nom. Dans cet exemple, la liaison symptôme—cause est de nature métonymique (présence d'un invariant sémantique: ici, la couleur rouge).

D'une façon générale, l'ensemble des connexions *a priori* comprend un sous-ensemble spécifié par la présence d'une relation métonymique entre les termes de la configuration (cause—agent—origine) et le symptôme. La métonymie peut-être considérée sous deux perspectives: (a) la récurrence d'un invariant tout au long de l'enchaînement (telle la couleur rouge); (b) l'identité du support organique du symptôme et du point d'application de la causalité (pied, etc.) — relation d'adhérence, pourrait-on dire.

Les deux exemples précédents illustrent bien que la figure de style (métonymie, métaphore) impliquée par la *dénomination* du trouble est indépendante de la *nature de la liaison causale*: autonomie absolue du terme métaphorique dans l'exemple de *binibali*; pure expression sémantique et de la cause et de la perception du symptôme dans l'exemple d'enchaînement métonymique *nūfūdāhāri*. Evidemment, dès qu'une connexion est de nature métonymique, l'élément

invariant peut être présent à toute étape de l'enchaînement, y compris dans la dénomination du trouble ou dans son traitement. Il apparaît que la référence à un agent n'est pas une condition nécessaire de l'établissement de connexions métonymiques. On peut se demander, en revanche, si elle ne l'est pas pour la construction de connexions métaphoriques.

Symptôme \leftrightarrow agent

De nombreuses étiologies *a priori* relèvent de ce type de connexion, très commune dans les systèmes médicaux africains: soient, rapidement, les maladies imputées à la sorcellerie, à des puissances magiques (fétiche/*yasūngo*, *katyene*, etc.). L'être (le sorcier) ou la puissance constituent l'agent, l'intention (la jalousie) l'origine, et divers moyens les causes (un fétiche pouvant ainsi figurer tantôt comme agent autonome, tantôt comme instrument).

Soit par exemple *meheni*/l'hameçon (dysphagie soudaine pouvant entraîner rapidement la mort). Il est dit que c'est une maladie 'jetée' *yaa wa mi*. De toutes natures (bénignes ou mortelles, soudaines ou chroniques), les maladies 'jetées' ou 'ramassées' ont pour trait commun la triple référence à un agent (généralement un sorcier, l'ennemi), à une cause (l'objet jeté qui sert de moyen) et à une origine d'ordre psycho-sociologique (l'intention de nuire, le ressentiment, ...). Leurs constantes symptomatologiques consistent en un caractère incertain du tableau clinique initial, sa transformation incessante (éventuellement vers la chronicité) ou son évolution inattendue (la mort rapide). Dans ce cas, l'objet (la cause) est dit être à 'l'intérieur' du malade: ainsi *meheni*/l'hameçon, où le malade est censé avoir avalé un hameçon jeté dans sa nourriture ou sa boisson, qui l'empêche désormais d'avalier et de s'alimenter; ou bien *fungo finingi*/l'abcès de l'intérieur, où il est dit que le malade au début ne manifeste aucun symptôme, mais décède au moment où il commence à se plaindre de maux de tête. Les maladies 'ramassées' comme *toyayi*/le mal aux pieds, suivent le même schéma: un agent mal intentionné 'met la maladie sur le passage de son ennemi'. Ces maladies ont donc *a priori* la forme d'un couplage, mais ont précisément un contenu polyvalent, évolutif, dissimulé, qui dans le même mouvement interdit toute possibilité d'assignation biunivoque.

Certaines maladies comme *yedapegi*/balayeur de pied (le pian) admettent déjà dans l'*a priori* une bifurcation possible entre agent et cause, qui ne sont pas nécessairement congruents: on contracte *yedapegi* lorsqu'on marche soit sur un endroit 'maléfique', soit sur le petit insecte *jūndu*. Deux liaisons conditionnelles sont ainsi juxtaposées dans l'*a priori*, relevant de niveaux d'explication hétérogènes, mais non juxtaposables à l'instant *t* d'un segment thérapeutique donné. 'Fétiches', 'génies'/*mādebele* constituent également des agents *a priori* de séries de symptômes: parmi les implications postulées, relevons l'exemple des 'douleurs aux oreilles', imputées à une gifle des génies offensés par un manquement à leur égard.

Toutes les catégories étiologiques figurant dans le

tableau récapitulatif donné plus haut peuvent, par définition, occuper la place de l'agent, et non seulement des êtres doués d'intentionnalité (tels que les sorciers, par ex.). Par ailleurs, l'origine postulée n'est pas nécessairement une réaction d'ordre psychosociologique (comme le ressentiment), mais peut être un message inaugural ou réitéré envoyé par certains agents: par exemple, la gale persistante/*sigbāhari*, est dite 'jetée' par l'esprit gardien *jiniḡefɔɔ* (le "créateur" de l'individu) comme préambule à une exigence, qui précisément équivaut au traitement de la maladie (port d'un signe propre de *jiniḡefɔɔ*, chemise blanche à sept bandes, bracelet de cauris, etc.). Cette représentation de l'origine de la maladie comme préfiguration d'une alliance est un trait majeur de la liaison causale de type *yawige*.

Les enchaînements yawige

Une maladie est dite *yawige*/la chose qui poursuit, qui insiste (*yariga*: chose; *wi*: poursuivre) lorsqu'elle est imputée à l'ingestion, la vue ou le contact, du fait de la mère ou d'une ascendante maternelle de l'individu malade, d'un animal vivant ou mort, ou bien à la mise à mort de cet animal par son mari chasseur lorsqu'elle était enceinte. Tout animal, domestique ou sauvage, peut figurer parmi les agents de ces maladies. La liaison entre l'agent et le symptôme est effectuée par le principe *jūma*, composante de tout être vivant, fonctionnant ici comme cause. Tout cadavre, humain et animal, est un support de *jūma* susceptible d'"attraper"/*tyo* les individus en contact (direct ou non) avec le corps (il suffit d'être dans le même lieu)—*a fortiori* le chasseur qui a tué l'animal.

Les maladies *yawige* proprement dites sont des maladies infantiles. Il existe ainsi toute une série de couplages *a priori* entre un ensemble de syndromes infantiles et un ensemble d'animaux:

Par exemple: *bau*/le mouton; le nouveau-né ou l'enfant respire comme un mouton; il est dit que sa mère a donc mangé de la viande de mouton pendant sa grossesse; traitement: boire de l'eau ayant servi à laver un mouton.

Ou bien: *kukehere*/la mort raide, un insecte; le tétanos du nouveau-né a pour origine le fait que la mère enceinte a marché sur l'insecte *kukehere* qui se recroqueville lorsqu'on le touche.

Ou bien: *pyegi*/le lièvre; l'enfant dort les yeux ouverts comme un lièvre; la mère du nourrisson est supposée en avoir mangé pendant sa grossesse; traitement: port de l'objet *yawige* représentant le lièvre.

On peut ainsi énumérer: *dekeu*/le chat (toux-amaigrissement); *kewuzu*/le singe noir (amaigrissement, doigts en crochets comme ceux du singe); *sɔɔ*/la tortue aquatique (gros ventre du kwashior-kor, hépatosplénomégalie); *ghori*/le caméléon (yeux grand ouverts); *yiriu*/le porc-épic (plaies sur tout le corps) etc.

Dans la majorité des cas, il existe un invariant sémantique commun à l'agent-animal, à la dénomination du symptôme, aux manifestations organiques perçues et au traitement susceptible de lever le symptôme. Soit l'invariant 'lièvre' dans la maladie *pyegi*; l'enchaînement *yawige* met en oeuvre à la fois

métaphore et métonymie: une première opération à caractère métonymique subsume l'animal lièvre sous un de ses traits: {dormir les yeux ouverts}; ensuite, ce trait métaphorise le symptôme de l'enfant: l'enfant dort les yeux ouverts *comme* le lièvre; enfin, une dernière opération métonymique inclut une partie de l'animal dans le traitement: par ex., port d'un objet comportant la patte d'un lièvre.

Entendues au sens restreint, les maladies *yawige* comportent une forme de causalité commune, fondée sur l'idée de la contagion, de la contamination par le *jūma* d'un animal. Cependant, tout animal intervenant soit dans la dénomination soit dans la position de l'agent de la maladie n'est pas conçu comme animal *yawige* (par exemple, *sɔpya*/noyau de la biche (la rougeole); ou *nūfūdāhāri*/les vers évoqués plus haut, etc.). Par ailleurs, les Senoufo peuvent également nommer *yawige*/chose qui poursuit, non seulement des animaux, mais aussi des instances telles que le gardien de la personne/*jiniḡefɔɔ*, les génies/*mādebele*, *nakāhābele* ou les jumeaux/*hambele*. En effet, le terme *yawige* dénote un mode d'action de l'agent (l'insistance, l'actualisation ou la réactualisation d'un lien) et une séquence causale spécifique dans laquelle l'agent attrape/*tyo* le malade, l'origine du symptôme étant non seulement différée, mais antériorisée dans le temps généalogique.

En outre, l'extension du terme *yawige* aux instances évoquées s'explique par la double signification de ce terme: tout en qualifiant un enchaînement causal singulier, il désigne également à l'autre extrême du processus—le traitement—l'objet représentant l'agent, objet dont le port est dit amener la résolution du symptôme. A cette étape encore, —où l'essentiel du traitement est le port d'un signe propre à l'agent identifié—les animaux *yawige*, *jiniḡefɔɔ*, les génies, les jumeaux, voire le *sādoho* relèvent du même paradigme. Ainsi, les nourrissons ou enfants affectés par une maladie *yawige* portent aux poignets, chevilles, hanches, etc. des objets représentant en miniature l'animal responsable de leurs maux. De la même manière, celui dont le symptôme est assigné aux jumeaux ou au *sādoho* porte des bagues ou des bracelets doubles—objets '*yawige*' des jumeaux, ou bien le bracelet en forme de python—objet '*yawige*' du *sādoho*.

Le signe distinctif de l'agent comme part essentielle du traitement n'est pas nécessairement un objet matériel. Il consiste très fréquemment en l'imposition d'un nom, par exemple de l'animal en cause: l'anthroponymie senoufo abonde en *Gonāo*, *Gotya*/garçon ou fille-poulet, *Fotya*/fille-python etc. . . . —tous noms qui attestent de cet événement antérieur où tel animal a 'attrapé' un ascendant. L'extension de la notion de *yawige* est telle qu'un présage/*kaṗāhānā* peut également tenir lieu de symptôme et aboutir à l'instauration d'un lien *yawige* avec un animal: par exemple, un mode de rencontre inhabituel du père avec un python, et toute la série d'enfants à naître portera des noms *yawige* [13].

Pour clore ce chapitre, remarquons que la notion-pivot de *jūma* peut marquer le point de départ du raisonnement: il est dit en effet que tout individu

ayant été en contact avec le *nūma* d'un être vivant (meurtre, chasse) tombera malade, en manifestant des symptômes de dépérissement ou de folie, à moins qu'il n'effectue des rites de purification. Il apparaît alors que le *nūma* est une cause de maladie, un principe autonome et agressif, dans la mesure même où son support originel est mort *sans* maladie: le *nūma* potentiellement le plus dangereux est celui de l'individu mort *seno*, décédé accidentellement, hors village, c'est à dire sans avoir eu 'le temps d'être malade'. Il y a ici antériorité de la cause par rapport à l'effet. Par le biais de la notion de *nūma*, le modèle d'inférence *yawige* fonctionne donc, *a priori*, dans les deux sens ($A \rightarrow B$, $B \rightarrow A$), soit sur les modes inductif ou déductif.

Symptôme \leftrightarrow origine

La plupart des relations de ce type se présentent, comme le cas précédent, sous la double orientation inductive et déductive: ainsi, il est dit qu'une femme qui voit le masque du *poro* à tête penchée *zāgbo* mettra au monde un enfant qui aura la tête penchée; ou bien: une femme qui exécute mal une partie du rituel des funérailles d'une femme *sādo* sera immédiatement 'attachée' par la puissance du *sādo* sous forme de convulsions etc. Ces enchaînements font découler le symptôme de l'événement, mais de fait celui-là est 'préformé' dans celui-ci, par la médiation de la notion d'interdit/*yafūgo*: ce sont en effet les *yafūyi* de tel masque, de tel rituel que d'être vu, mal exécuté etc. Comme on dit, 'il n'y aurait pas d'interdit si la maladie ou le malheur n'en découlaient pas'. Ces exemples montrent que les liaisons causales peuvent s'énoncer sous forme réversible, mais que seule la nature de ce lien (symptôme \rightarrow événement \rightarrow symptôme) est pertinente. La représentation de la maladie *laagbo*/gros ventre (*laa*: ventre, intestin; *gbo*: grand, gros—dysenterie amibienne avec hémorragie) l'illustre nettement. Il est dit que ce trouble est imputable à la transgression d'un interdit: à un rapport sexuel soit avec son épouse ménopausée, soit avec une femme qu'un acte magique de son ex-mari a privé de ses règles, soit avec une veuve non séparée rituellement de son mari décédé. Tout comme dans les exemples précédents, l'implication est ici posée simultanément dans les deux sens: si une femme a le 'gros ventre', c'est qu'elle a eu des rapports sexuels relevant des trois cas précités et si elle court le risque de tels rapports, elle aura *laagbo*.

On aura remarqué que la notion d'interdit est un élément récurrent des énoncés *a priori* qui mettent en exergue le couplage symptôme \leftrightarrow origine. Avant d'analyser cette notion essentielle, mentionnons que l'origine d'un symptôme peut être attribuée à des actes qui ne s'y réfèrent pas. Ainsi des liaisons qui comportent un degré de complexité (soit un nombre d'étapes dans l'enchaînement) supérieur aux implications simples (symptôme \rightarrow cause ou symptôme \rightarrow origine) évoquées plus haut. C'est le cas des symptômes étayés par une certaine conception de la 'contagion', présupposant l'existence de relais: par exemple, les oreillons *gbohosuluyi*/grosses (mâchoires) bouchées/, sont dits survenir si un individu se moque d'un malade ayant déjà contracté les oreil-

lons, à cause de son visage enflé. Cette représentation du rire comme origine d'une affection se rencontre également comme étiologie possible de la céphalée/*gbahayulogi* ("le front qui pend"): l'un des traitements consiste en ce que le malade se rende volontairement ridicule, afin de passer la maladie qui 'attrapera' le premier individu qui rira de lui. On a ici une conception du symptôme comme entité contagieuse douée—comme toute maladie—d'une dynamique autonome [14].

La notion de yafūgo/interdit (*yariga/chose*; *fūu/ne pas faire, ne pas voir, etc.*)

Les liaisons *a priori* décrites plus haut se conforment à un modèle de causalité quadrangulaire plus ou moins explicité, où un élément donné est affecté à un poste (cause, agent, origine) donné. Le modèle de la transgression d'interdit/*yafūgo* présente certaines particularités. *Yafūgo*/la chose interdite est une propriété qui peut s'attacher à tout objet, fonction, circonstance, moment, animal, etc. C'est une qualité 'positive' de la substance de ces objets ou êtres, qui peut en outre référer à toute action possible: voir, toucher, manger, marcher, etc. C'est ainsi que l'on dit: c'est le *yafūgo* de tel matriclan de tel village de manger du *kafa*/guib harnaché; ou bien c'est un *yafūgo* de *pinigefols* de manger de la sauce au gombo; ou bien c'est un *yafūgo* du mortier de s'asseoir dessus, etc. On dira aussi: telle instance 'n'aime pas' tel acte. La transgression d'un *yafūgo* est supposée entraîner *a priori* certaines conséquences négatives pour l'auteur ou éventuellement un membre ou la totalité de l'un de ses groupes d'appartenance: parmi elles, malheurs et maladies. Comme on l'a dit, la notion d'interdit est un point d'articulation essentiel des causalités possibles—dans les deux sens précédemment évoqués, symptôme \rightarrow configuration explicative, ou bien événement inaugural \rightarrow symptôme.

Quelles sont les caractéristiques d'une liaison causale où figure la notion d'interdit?

(1) *Premier cas*. Prise isolément, la liaison *a priori* où le symptôme est rapporté à une transgression de *yafūgo* (ou l'inverse) assigne des contenus variables au poste de l'agent: le symptôme est posé ici comme *effet direct*, sans intermédiaire, de l'acte ou événement initial—et réciproquement. Par exemple, c'est "le *yafūgo* de ce *wara*"/feuilles (médicament) que de ne pas être payé, la sanction étant l'inefficacité du *wara* et/ou la réitération du symptôme [15]. La séquence causale est un passage direct de la configuration {cause—origine} au symptôme. Selon la perspective adoptée, on pourrait dire que la place de l'agent est soit inoccupée, soit qu'elle est tenue par l'objet support du *yafūgo*, soit par l'individu transgresseur lui-même. On a ainsi la liaison {symptôme \leftrightarrow chose-ne pas faire}—soit la question du comment. Celle du pourquoi de cette liaison reste par ailleurs en suspens. Cette dernière réfère en effet, dans ce cas, à un ensemble d'associations symboliques *a priori*, impossibles à développer ici, qui rendent compte de certaines incompatibilités: l'interdit *senoufo* a en effet le caractère très général d'une conjonction de pôles symboliques marquée négativement (par exemple, mortier \rightarrow féminité \Rightarrow interdit du mortier \rightarrow

position assise de l'homme). Soulignons qu'il existe des catégories de destinataires possibles et impossibles pour le *yafūgo* et donc pour le symptôme que sa transgression est supposée entraîner: hommes/femmes, initiés/non initiés, etc. Certaines liaisons causales {symptôme ↔ transgression d'interdit} sont donc impossibles.

Enfin, c'est par ce caractère de lien direct—où l'agent n'est pas nécessaire dans l'enchaînement explicatif—que la notion de *yafūgo* peut renvoyer de fait à tous les agents possibles: concrètement toute entité, chose ou moment. Chez les Senoufo, l'interdit a, si l'on peut dire, un caractère "génitif", et par là-même peut s'associer à tout objet.

(2) *Deuxième cas.* La liaison causale {transgression d'interdit ↔ symptôme} ne se présente pas *a priori* comme suffisante, mais est insérée dans une séquence plus complexe, où c'est cette liaison même qui tient

être <i>yawige</i> ↔ transgression ↔ puissance <i>nūma</i> ↔ symptôme	↔ remède
d'un de ses	(renvoyant à
<i>yafūgo</i>	un trait de
	l'être <i>yawige</i>)
	(partie ou
	représentation
	de l'être <i>yawige</i>)

Soit une séquence métonymique qui présente le trait essentiel d'être différée dans le temps: le sujet support du symptôme n'est non seulement pas identique à celui qui a inauguré la séquence, mais en est nécessairement un descendant. Le symptôme est dit pouvoir survenir plusieurs années après la transgression initiale par la mère, mais cette rupture temporelle n'est pas pertinente dans la mesure où l'engendrement du symptôme pose ici à l'évidence une autre temporalité—et de même, un autre mode de séparation spatiale des êtres.

D'une façon générale, l'action de la plupart des agents distingués par les Senoufo est conçue sous les espèces d'une réaction à la transgression des *yafūgo* spécifiques qui leur sont accolés. L'interdit étant l'énoncé *a priori* par excellence, sa prégnance ne témoignerait-elle pas, à elle seule, d'une pensée causale qui préforme—institue des bornages à—l'interprétation de l'événement-maladie au moyen de schèmes étiologiques précis?

Les modèles a priori à étiologies complexes: les cas à disjonction inclusive (soit . . . soit)

Nous venons de décrire l'ensemble des connexions et couplages où le symptôme, plus ou moins explicité, est mis en rapport avec une cause, un agent ou une origine donnés. Soulignons à présent que les causalités *a priori* comprennent également des modèles qui spécifient des alternatives étiologiques pour un trouble singulier, autrement dit tendent à circonscrire des faisceaux interprétatifs préférentiels qui d'emblée supposent et orientent des voies de commutabilité.

Ainsi, l'inflammation rectale/*nukūngi* ('le gros nombril de l'anus') est une maladie 'jetée' par empoisonnement de la nourriture, mais elle est aussi une maladie "ramassée" si le malade a transgressé un interdit d'un fétiche/*yasūngo* (par exemple un *katyene* mis dans un champ pour sanctionner d'éventuels voleurs); elle est aussi une maladie transmissible à l'enfant d'une femme qui l'a 'ramassée' durant sa grossesse; et elle est aussi une compli-

la place de l'origine ou de la cause: par exemple, il est dit: c'est un *yafūgo* du *pinigefɔɔ* que les femmes mangent de la sauce au gombo, dont la transgression entraîne le symptôme *nyɔforigi*/bouche écorchée; ou bien, c'est un *yafūgo* de la puissance du matrilignage/*sādoho* qu'il y ait adultère ou inceste dans le matrilignage, dont la transgression y entraîne décès ou maladies infantiles. Un agent support d'interdits propres, est donc spécifié ici, dans le modèle explicatif fondé sur la transgression.

Yafūgo et yawige

L'enchaînement *yawige* est le paradigme de ces séquences complexes: le symptôme d'une maladie *yawige* est précisément entraîné par la transgression d'un *yafūgo* consistant pour la future mère à ne pas voir, ne pas manger, etc.—ou pour le futur père à ne pas tuer—tel animal. On a ainsi l'enchaînement:

cation de la maladie *fūngo nāmiga*/plaie de l'intérieur, elle-même rarement 'naturelle'.

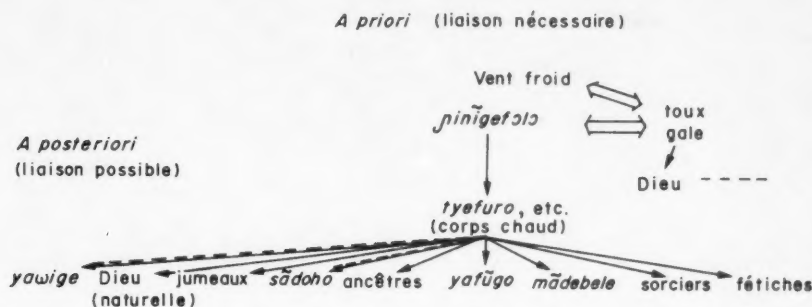
Le cas de la lèpre/*yaanyεeme* (maladie rouge) est légèrement différent. On en énonce deux formes possibles: maladie 'jetée' et 'chemise de sorcier', correspondant à des syndromes légèrement distincts. 'Jetée', le malade semble totalement pris par la maladie (doigts sectionnés, abondance de plaies, etc.); mais s'il ne semble pas malade, 'même si les doigts sont coupés', 's'il n'y a pas de plaies', s'il continue à travailler, on dit que la maladie n'est qu'apparente, qu'il porte une 'chemise de sorcier', et qu'il la quitte la nuit pour se réunir avec ses collègues sorciers pour la réendosser le matin. C'est précisément lui qui est l'agent du 'jet' de la maladie *yaanyεeme* sur la chemise de sa victime—retour à la série précédente: maladie 'jetée'.

Autre exemple: la 'plaie qui dure'/*nōmkaagi* est une maladie soit 'jetée' par un 'individu qui connaît'/*sityilio*, soit voulue par le malade lui-même, ainsi stigmatisé comme sorcier/*deo*. Le raisonnement est ici de nature circulaire: c'est une maladie 'jetée' si le sujet n'est pas un sorcier; c'est une plaie 'voulue', une 'fausse' plaie, si le malade est soupçonné de sorcellerie. Il existe aussi une série parallèle, dans le cas où le malade est 'pauvre': la misère matérielle—et les conditions d'hygiène—constituent alors l'explication empirique du symptôme.

Enfin, pour une large variété de symptômes ou de syndromes, la pensée étiologique senoufo admet *a priori* un degré élevé de commutabilité, tout en traçant des registres d'interprétation préférentiels: par exemple la diarrhée, les oedèmes, le dépérissement, les rhumatismes, etc. sont imputables à des configurations d'antécédents les plus divers. Ainsi, le corps chaud/*tyefuro* (fièvre, fatigue, amaigrissement) est une condition dont il est dit qu'elle est attribuable—particulièrement s'il s'agit d'un enfant—soit à un *yawige* pris ici en extension (l'alliance proposée par un animal); soit à l'esprit gardien/*pinigefɔɔ*—qui peut faire office de relais—; soit à l'instance *sādoho* du matrilignage. Très fréquente,

cette condition pathologique est le modèle même des maladies dont l'étiologie ne se détermine qu'*a posteriori*, malgré la préexistence d'un faisceau d'alternatives. La causalité est régie ici par un principe qui est extrinsèque aux connexions établies *a priori*.

Pour rassembler ce qui a été décrit précédemment, le tableau suivant illustre sur un exemple comment la causalité *a priori* combine des liens nécessaires (ou hypothétiques) et des liens possibles, des couplages et des faisceaux de connexions.



Légende: La dimension horizontale renvoie ici aux causalités énoncées *a priori*, la dimension verticale aux causalités constatées *a posteriori* (↔ liaison d'implication réciproque; → liaison possible; ⇒ chemins préférentiels).

Pour finir, un certain nombre de remarques d'ordre général s'imposent. En premier lieu, comme on l'a vu, l'ensemble des connexions décrites ne constitue pas un corpus fixe, fini et généralisable à la totalité du monde senoufo. Nous n'avons pas décrit une taxinomie médicale, entreprise absurde, mais cherché à élucider quels principes formels soutiennent la tendance de cette société à élaborer des fragments de codes étiologiques. Il est impossible d'éluder la question de la raison d'être de tels codes, auxquels certaines sociétés ont donné un développement bien plus systématique que les Senoufo [16-19]. Pas plus qu'ils ne la reflètent, ces codes ne régissent pas directement l'action médicale, car, comme le note A. Young, le diagnostic n'est jamais automatique [20]. Ils ne sont pas non plus réductibles à une de leurs fonctions, à savoir d'ériger la maladie en sanction de certaines conduites sociales indésirables. Enfin, il ne suffit pas de les considérer comme un segment du système symbolique local, ni comme le seul produit de la propension de l'esprit humain à transformer les faits sensibles—en l'occurrence la maladie—en catégories intelligibles au moyen de connexions qui constitueraient une structure. Ces approches sont toutes légitimes, pourvu qu'elles ne méconnaissent pas l'hétérogénéité entre la logique de ces codages et celle qui fonde les élaborations pragmatiques, ni ne fassent l'économie de l'analyse des représentations rémanentes dans l'une et l'autre.

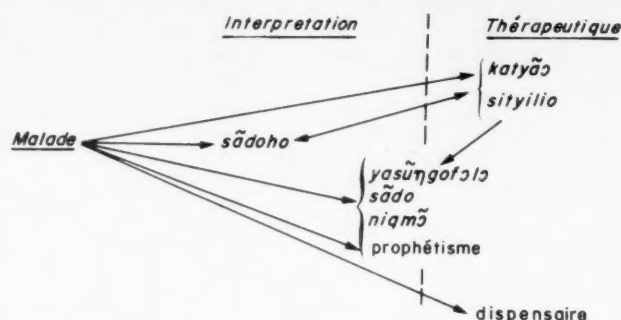
LES CAUSALITES A POSTERIORI

L'irruption de la maladie peut entraîner trois sortes de réactions: l'attente de la résolution spontanée du trouble, le recours immédiat à des moyens thérapeutiques, et l'établissement éventuel d'un diagnostic formel susceptible de fournir des instructions étiologiques. Même si c'est un truisme, soulignons que la spécification de la cause, de l'agent et de l'origine n'est en aucune manière une condition

préalable et nécessaire au traitement de la maladie. Lorsque les paysans senoufo administrent leurs remèdes domestiques, absorbent la panacée de tel guérisseur réputé ou les pilules du dispensaire local, assorties, le cas échéant, d'un vœu à leurs protecteurs personnels ou au *yasūngo* de leur village, ils ne s'interrogent ni ne sont informés nécessairement sur le pourquoi, le qui ou le comment de la maladie qui leur arrive. Que leur action ou l'action de leurs thérapeutes soient fondées ou non sur quelque connexion causale *a priori*, la transaction thérapeutique elle-même n'explicite pas nécessairement, voire peut ignorer, cette connexion. A la différence d'autres systèmes—notamment bantu—les institutions thérapeutiques senoufo fonctionnent bien souvent de façon étanche et autonome par rapport aux institutions interprétatives.

En effet, une seule institution cumule ces deux fonctions, celle des *nigmā* 'tapeurs de racines', à la fois devins, *yasūngofalo* 'propriétaires de fétiche', et thérapeutes professionnels, qui se caractérisent par une conception agonistique du traitement de la maladie, référant préférentiellement au modèle explicatif de la magie et de la sorcellerie. La divination senoufo par excellence, le *sādoho*, est, elle, une institution purement interprétative; ses instructions ne concernent nullement les préparations thérapeutiques, ni les opérations de l'autre catégorie, largement majoritaire, de thérapeutes (*katyā* ou *sityilio*/celui qui sait, qui connaît), ceux qui possèdent un savoir pharmacologique partiel applicable à certaines maladies 'ordinaires'. Ces thérapeutes se préoccupent peu d'étiologie [21]. Les gens du commun ont une connaissance minimale de la pharmacopée, pour 'sauver sa tête et celle des siens'. Quant à la médecine occidentale, elle donne paradoxalement lieu à des démarches thérapeutiques congruentes avec les précédentes, dans la mesure où elle n'assortit pas ses soins d'explications étiologiques. Ce qui n'est pas le cas en revanche des mouvements thérapeutiques introduits par des

prophètes guérisseurs ou des 'propriétaires de fétiches' pour qui la thérapie va de pair avec une détermination des agents, laquelle est la condition de l'efficacité thérapeutique. Soit le tableau suivant.



Cette étanchéité explique entre autres que la multiplication des alternatives thérapeutiques n'entraîne pas nécessairement la diversification des modèles de causalité. Quelle que soit l'efficacité d'un nouveau traitement—dispensé par exemple à l'hôpital—, la perception de cette efficacité instrumentale n'est pas le facteur déterminant de la modification de la pensée causale.

Il en est de même de l'Islam. Son rôle dans le pluralisme médical senoufo n'apparaît pas dans ce texte [22]. L'omission est délibérée. L'Islam est fortement mais inégalement présent en pays senoufo: les groupes situés au Mali et au Nord-ouest du pays senoufo ivoirien sont largement islamisés et influencés par leurs voisins malinké (patrilinéarité, absence du *poro*, etc. . . .). L'islamisation est nettement plus prononcée en milieu urbain qu'en milieu rural. Le recours aux remèdes des guérisseurs musulmans, souvent itinérants, est courant. En pays nafara, les prophètes-guérisseurs musulmans—qui privilégient, à l'image des *yāsūngofɔɔ*, l'interprétation par la sorcellerie, tout en modifiant la conception agonistique de la maladie qu'ils réfèrent à la volonté divine—drainent cycliquement une clientèle rurale parfois considérable. Si l'importance des procédures islamiques n'est pas soulignée ici, c'est pour trois raisons. Cet article est centré sur les modes d'inférence causale et non sur le pluralisme des institutions thérapeutiques. Comme il vient d'être souligné, ces institutions fonctionnent, chez les Senoufo, de manière largement indépendante par rapport aux modèles de causalité: une thérapie musulmane peut se coordonner avec une étiologie 'autochtone', tel le *sādoho*, sans la modifier. *Last but not least*, la violence des rapports historiques multi-séculaires entre les Senoufo et leurs conquérants et commerçants islamiques explique sans doute la forte et persistante tension idéologique entre Dioula et Senoufo: (1) en milieu rural, l'Islam n'est pas un facteur de communalisation, aucun segment social ne s'en réclame en tant que tel; (2) toute appropriation idéologique de la maladie au moyen de *modèles explicatifs* islamiques serait un calcul social voué à l'échec.

La divination

L'interprétation étiologique formelle de l'événement-maladie—et par conséquent la détermination de la causalité *a posteriori*—sont du ressort de la divination/*sādoho*, activité à dominante féminine,

fortement prégnante dans la vie quotidienne. Les devins senoufo *sādoobele* ne soignent ni ne se prononcent en matière symptomatologique ou nosologique. Ils ou elles travaillent au moyen d'une collection d'objets pouvant dépasser la centaine et affectés chacun à une catégorie lexicale ou encyclopédique. À l'exception évidente des facteurs mécaniques, parmi ces objets figurent les emblèmes représentatifs de toutes les catégories étiologiques évoquées plus haut: *kulotyɔɔ*/Dieu, les êtres *yawige* (python, caméléon, etc.), certains interdits/ *yafūgo*, les objets-fétiches/*yāsūngo* ou *katyene*, collectifs ou individuels, le *witch* et les différentes variétés de génies, les morts et le *sādoho*, le 'créateur' de l'individu/*pinigefɔɔ* et les jumeaux . . . En bref, le sac du devin contient une série finie de causalités virtuelles. La maladie est toujours figurée par un objet qui porte ce nom, et elle est souvent identifiée au moyen de l'emblème nommé feu/*naa*, qui connote selon le contexte la fièvre/*tyefuro*, la colère, le conflit, etc. . . . tout ce qui 'chauffe la famille'.

Le devin ignore par définition l'identité et les motifs de son client, nécessairement accompagné par un témoin, et consultant souvent pour un tiers (notamment en cas de maladie). La séance divinatoire comporte trois moments, toujours suivis d'une prescription (sacrifice, évitement, etc.).

—L'interprétation des configurations formées par les objets répandus à terre, par le devin, qui lui permettent de déterminer les coordonnées élémentaires de la consultation (identité du consultant, motifs de la visite—présage, maladie, mort, etc.).

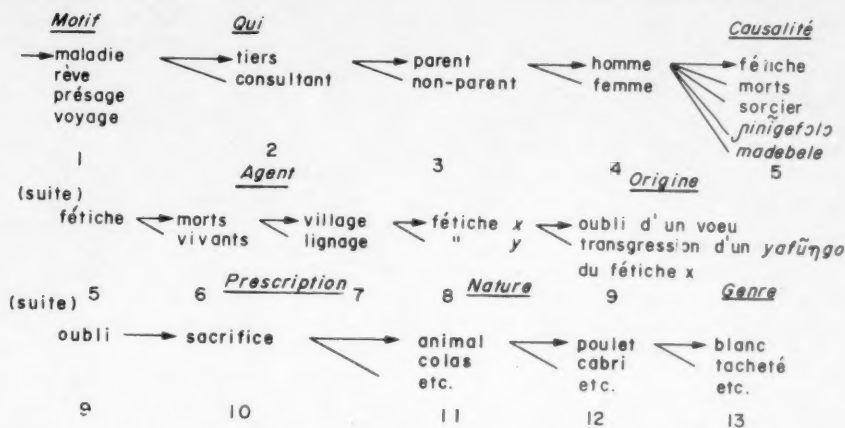
—La détermination progressive d'une causalité (principalement de l'agent) singulière, par un jeu de questions à réponses binaires, par itérations successives (oui/non, concrétisées par un claquement de la main du devin sur la cuisse du client ou par la position ouverte ou fermée d'un objet, *tobe* [23]).

—Les réponses par un procédé identique aux questions que le client n'est habilité à poser qu'en fin de séance, à des fins d'éclaircissement.

La procédure divinatoire repose sur la complémentarité de deux sources d'informations: (a) à partir d'une juxtaposition donnée d'emblèmes, délimitant une configuration de contenus combinables, le devin dispose d'un ensemble de syntagmes possibles; (b) à partir de cet ensemble d'énoncés possibles, il trace un chemin causal et prescriptif unique, selon le schéma du parcours au long d'une

structure arborescente. Au cours de la séance, il ne cesse d'effectuer des *feedbacks*, afin de vérifier la certitude des bifurcations choisies.

Soit un exemple de la détermination de l'étiologie d'un trouble: très schématiquement, il peut être représenté de la façon suivante.

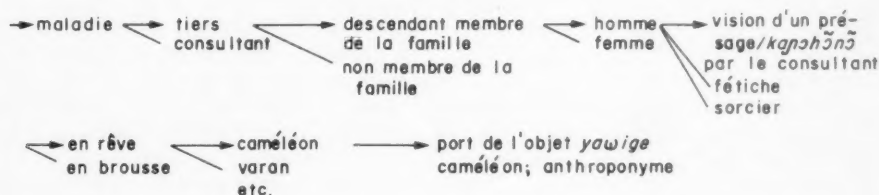


[Les flèches indiquent le chemin retenu au sein de différentes possibilités, inscrites verticalement]

Dans cet exemple, le diagnostic du devin peut être résumé ainsi: un parent du consultant a été rendu malade par le fétiche x de son village, parce qu'il a oublié de faire le sacrifice qu'il lui avait promis antérieurement. Ce diagnostic est particulièrement périlleux pour le devin, pour autant que l'origine de la maladie—le non-accomplissement du vœu—est rapporté ici à un événement réel et vérifiable qui peut ne pas avoir eu lieu.

Tel n'est pas le cas lorsque le devin attribue le trouble à un fait non empirique: si par exemple à la bifurcation no. 6, il avait emprunté la branche 'fétiche des vivants', il aurait pu développer la série suivante: un parent du consultant a été rendu malade par l'acte de sorcellerie d'une femme du matriclan Silué—ici assignée comme agent—habitant un quartier contigu à celui du malade.

Soit un autre exemple de séquence causale possible:



Dans ce cas, le diagnostic se résume ainsi: un descendant du consultant est malade, par exemple son fils, parce que l'animal yawige caméléon l'a attrapé/tyo; le consultant avait vu cet animal en brousse auparavant (vision-présage/kapchĩnĩ). La réalité de cet événement, de même que sa reconnaissance par le consultant, ne revêtent ici aucun caractère de nécessité. Il faut souligner que dans une très forte majorité de cas, l'épreuve de réalité ne se situe pas au niveau de l'adéquation du modèle explicatif proposé et des données empiriques, mais dans le choix d'une alternative à chaque étape du cheminement aboutissant à la formulation de ce modèle explicatif. Si, par exemple, un individu désire savoir l'origine de ses migraines répétées, et que le devin s'engage dans l'explication de l'accident survenu au cours d'un voyage effectué par une femme de sa maisonnée, sa compétence est d'emblée mise en question [24]. Pour reprendre le terme de Horton, la faillibilité des devins est une préoccupation constante des Senoufo, qui, dès qu'il s'agit

d'affaires graves, envoient consulter plusieurs personnes—de préférence étrangères à l'affaire—chez plusieurs devins, si possible éloignés de leur lieu de résidence.

Comme ailleurs, il existe un dispositif permettant de rendre compte des erreurs du devin. L'énoncé divinatoire se distingue des autres en ce que celui qui parle se récuse d'emblée—par définition—comme sujet de l'énonciation: celui qui parle est un autre, en l'occurrence les génies de la terre/mādebele, figurés au demeurant par des statuettes. La terre cultivée—nous y reviendrons—est l'interdit majeur des sādoobe. Par un procédé divinatoire formellement identique au précédent, les erreurs du devin sont rapportées soit à une transgression de cet interdit spécifique (avoir partagé l'eau ou le repas d'un cultivateur, avoir foulé la terre défrichée ou ramassé des termites avec une houe, etc.) soit à la transgression d'autres interdits, collectifs ou personnels (sexuels ou alimentaires). Ces transgressions sont censées entraîner automatiquement la duplicité ou la mutité des génies.

La commutation

Les Senoufo connaissent donc les mécanismes classiques de l'élaboration secondaire qui leur permet—en cas d'invalidité (ou d'inadéquation) du diagnostic du devin ou d'inefficacité de sa prescription—de passer d'un devin à un autre, et d'un registre étiologique à un autre, sans mettre en question la structure de leurs causalités. Les schémas figurés plus haut illustrent on ne peut plus nettement que leur art divinatoire connaît le principe de 'séquences causales convergentes' rendant possible certains types de commutation sous certaines conditions.

Pour aborder ce problème central, relevons le caractère flou des termes '*remedy*' ou '*remedial prescription*', utilisés par Horton [11, p. 170] pour désigner l'action liée à et découlant de la prescription divinatoire. Tout se passe comme si, pour Horton, la thérapeutique, le remède, étaient entièrement réglés par les instructions divinatoires. Le moins que l'on puisse dire est que les matériaux senoufo incitent à séparer analytiquement prescriptions divinatoires et prescriptions thérapeutiques [25]. Aussi, l'insuccès d'un recours thérapeutique donné n'entraîne-t-il pas nécessairement chez les Senoufo, la réitération de la démarche divinatoire, et par conséquent une commutation du modèle explicatif—car, encore une fois, l'efficacité d'un *wara* 'médicament' n'est pas liée à une quelconque adéquation de sa composition à un modèle explicatif. Dans leurs quêtes thérapeutiques, par contre, les Senoufo commutent facilement et pragmatiquement les institutions de soins disponibles—qu'il s'agisse d'herbalistes locaux, de propriétaires de fétiches, de dispensaire, etc. . . .—pour des troubles rapportés à une causalité identique et inchangée tout au long de l'itinéraire du malade.

Par ailleurs, l'hypothèse de Horton concernant la libre commutabilité des causalités souffre d'une perspective par trop globalisante [26], soit une absence de distinction des différents éléments de la configuration antécédente (cause, agent et origine). Nous avons décrit l'existence de couplages, d'implications réciproques *a priori*—non commutables—(exemple: *gale--jiniŋɛfɔlɔ*), parallèlement à celle de liens de causalité inassignables *a priori*—largement commutables (diarrhée, *tyefuro* 'corps chaud', etc. . .).

L'interprétation divinatoire, exercice de la causalité *a posteriori*, connaît, elle aussi, cette coexistence de connexions commutables et non commutables. Dans certains cas, elle n'oblitére pas, voire reconstruit l'implication *a priori*: par exemple, le lien métonymique 'fort' d'implication réciproque entre la maladie *laagbo*/gros ventre (dysenterie amibienne avec sang) et les rapports sexuels avec une femme souffrant d'aménorrhée ou ménopausée (qui donc 'conserve' son sang) ne pourra être qu'entériné par le devin s'il a accès aux éléments de cette implication.

En outre, la commutabilité peut être une qualité non du modèle explicatif pris comme un tout, mais de l'un ou l'autre de ses éléments: cause, agent, origine. Ainsi, si le devin enclenche, au sujet d'une maladie infantile, la série *kajɔhɔnɔ*—brousse—animal—*yawige*, sa liberté de permutation se réduit à un choix au sein des conditions possibles des causes et de l'origine (père ou mère; voir ou toucher, etc. . .).

En effet, le lien métonymique *a priori*, connu de tous, entre symptôme et agent-animal (par exemple: yeux ouverts—lièvre; plaies sur tout le corps—porc-épic) supprime, pour le devin, toute possibilité de permuter l'agent-animal. Tout le monde sait que les plaies infantiles renvoient au *yawige* porc-épic, la commutabilité ne porte ici que sur la détermination des causes (comment?) et de l'origine (pourquoi?).

On aura remarqué que dans les deux exemples cités (*laagbo* et *yawige*), les destinataires de la maladie constituent des catégories déterminées (dans ces cas, individus mariés, enfants). N'y aurait-il pas une relation entre la pré-détermination des destinataires de la maladie et la restriction de la liberté de commutation divinatoire? Cette liberté est la plus grande, de toute évidence, pour les registres symptomatiques relativement indéfinis et sans spécification de destinataire, tels que la fièvre, la diarrhée etc., qui sont le lot quotidien d'une population totalement impaludée et affectée par des dysenteries de toutes origines [27]. C'est ici que le modèle de libre commutabilité avancé par Horton conserve toute sa pertinence.

SĀDOHO

Les problèmes que nous venons de soulever, et plus généralement celui de l'articulation des causalités *a priori* et *a posteriori*, se posent, semble-t-il, dans l'analyse de tous les 'systèmes médicaux' africains. A présent, nous allons présenter l'institution spécifique et essentielle qui semble fournir un principe de cohérence à la pensée causale senoufo.

Lorsqu'un matrilignage est confronté à la répétition de décès d'enfants, de maladies de toutes sortes, au phénomène perçu comme persistant du 'feu dans la famille' (fièvre, conflits, colère rentrée, etc.), le diagnostic divinatoire peut identifier comme agent de cet état de choses l'instance nommée *sādo*ho. Ce terme, rigoureusement intraduisible, désigne tout à la fois une puissance coextensive au matrilignage, une instance conférant la capacité divinatoire—l'une et l'autre fonctionnant comme catégorie étiologique—et une institution initiatique.

Le *sādo*ho lignager

Les Senoufo entendent par *sādo*ho de lignage l'instance sous le contrôle de laquelle doivent être placés tous les rapports sexuels des femmes du matrilignage au moyen d'un paiement appelé *yapere*/chose pour balayer, i.e. purifier. Ce paiement, variable selon les lignages, est effectué par l'homme au *sādo*ho de sa partenaire, aussi bien au début de la vie conjugale qu'à la suite de la découverte d'une relation sexuelle illégitime de la femme (adultère, inceste). Le paradigme sous-jacent est que tout rapport sexuel, légitime ou illégitime, entraîne automatiquement un état de 'souillure', appelé *fwɔɔ*, du matrilignage que le *sādo*ho a compétence pour sanctionner. Lorsque les malheurs se répètent, lorsque les enfants du lignage ont le 'corps chaud' *tyefuro* de façon anormale, le chef de maisonnée fait effectuer plusieurs consultations divinatoires: si les diagnostics convergent, cette condition pathologique sera considérée comme l'effet d'une souillure occa-

sionnée par un acte sexuel d'une femme du lignage, non soumis au contrôle du *sādo* par le paiement du *yapere*. L'adultère est en fait l'hypothèse la plus fréquente, et la seconde étape du processus consistera à identifier l'auteur de la souillure, dont l'aveu est indispensable à l'annulation du *fwɔrɔ* (par le paiement du *yapere*) et par conséquent à la résolution des signes anormaux. L'efficacité de tout traitement empirique de la maladie est ici tributaire de l'aveu. Pour certaines maladies, le *sādo* lignager occupe donc la place de l'agent identifié *a posteriori*.

On remarque immédiatement que le malade, support du symptôme, n'est pas le même individu que l'initiateur de son trouble. Toute femme soumise au contrôle du même *sādo* peut indifféremment occuper ces deux positions. En effet, le champ d'action de cette puissance définit les contours d'un groupe: à la lettre, le *sādo* est la substance même du groupe de descendance matrilineaire, il représente une corporéité en extension et en profondeur. Dans les causalités rapportées au *sādo*, les individus d'un matrilineage ne sont pas conçus comme unités discrètes dans le temps et dans l'espace—comme nous l'avons vu à propos des enchaînements où interviennent les animaux-agents *yawige*.

La continuité du matrilineage subsumée par cette puissance s'illustre par le mode d'élection et l'inscription généalogique des individus qui en sont les supports. En effet, à chaque génération, une femme *au moins* est 'prise', 'attrapée' *tyo* par le *sādo* du lignage pour 'attacher' *pwo* le *sādo* supporté autrefois par une ancêtre utérine. Le principe des 'chaines' de *sādoobe* est le suivant: toute place laissée vide par une *sādotya* décédée, tout *sādo* 'non attaché', doit être pourvue tôt ou tard. Car tout *sādo* 'non attaché', en attente, est un agent potentiel de maladie: des troubles fort variés peuvent être imputés soit à la vacuité de la place abandonnée, soit au refus obstiné de l'occuper. Ainsi, le *sādo* fait fonction d'agent dans un deuxième type de causalité, l'origine de la maladie étant ici non plus une souillure, mais une vacance.

Ce type de causalité s'organise selon le principe de la réactivation d'une inscription généalogique. Qu'il s'agisse de femmes ou d'hommes [28], les *sādoobe* morts du matrilineage constituent un stock d'ancêtres particuliers que les Senoufo—notamment les Nafara—distinguent des ancêtres 'ordinaires'. Il semble justifié de parler ici d'une tendance au stockage de positions singulières, tendance au stockage que nous retrouvons dans tout matrilineage senoufo sous une autre forme: les diagnostics divinatoires témoignent de la très grande fréquence des imputations de la maladie à des agents ou à des origines *préinscrits* dans l'histoire lignagère. Soient les ancêtres, les *sādo* en attente, les jumeaux, les fétiches laissés par les morts, les interdits héréditaires, les génies avec lesquels les morts ont conclu une alliance personnelle, les esprits aquatiques tutélaires du lignage, les *yawige* vus ou touchés par les ascendants maternels, les affaires antérieures de sorcellerie (*witchcraft*) intralignagère etc. Comme on le voit, dans cette liste figurent et des instances con-

stitutives du lignage en tant que corps et des *mémoriaux* érigés par des événements antérieurs—et plus particulièrement les malheurs ou les maladies qui ont 'pris' les morts (par exemple, les génies alliés à un défunt). Pour autant que nous puissions en juger, dans l'esprit des Senoufo, ces instances et ces mémoriaux ne se dissocient pas: d'apparence hétéroclite, ils sont pensés comme homogènes. Il semble que l'un des traits les plus remarquables du matrilineage senoufo est qu'il est une structure intégratrice et conservatrice d'événements [29].

La tendance au stockage et la référence divinatoire à une préinscription des catégories causales s'observe non seulement au niveau du matrilineage, mais aussi à celui de l'individu: outre les instances et les mémoriaux lignagers, l'individu est le point de convergence de marques singulières qui le renvoient à sa propre histoire: les interdits, les fétiches, les génies, les *yawige* hérités de son père—mais non du lignage de celui-ci—ou personnellement acquis, le *pinigefɔ* identifié et acquis éventuellement à l'occasion d'une maladie.

L'individu est ainsi le lieu où se superposent trois séries d'inscriptions cumulatives: celle de son groupe d'appartenance lignager, celle de son père [30] et celle de son histoire singulière—la dernière inaugurant, à son tour, une double série pour ses enfants et pour ses descendants utérins.

La réactivation de ces inscriptions en tant que termes de causalité de la maladie (agent, cause, origine) semble une caractéristique majeure de la démarche étiologique senoufo. Certes, un tel trait se repère dans bien d'autres sociétés africaines, et par ailleurs, ne résume pas la totalité de la pensée causale senoufo en cette matière. Il n'en reste pas moins que la conception de la maladie de l'individu—l'événement par excellence—comme réactivation d'événements antérieurs survenus à un corps collectif—le matrilineage—, semble fournir le principe de cohérence de la logique étiologique.

La preuve en est l'identité du processus initiatique du *sādo* lignager et du *sādo* divinatoire. La maladie, on l'a vu, constitue le terme initial de la séquence aboutissant à l'emprise du *sādo* sous ses deux formes. Mais, la procédure initiatique n'est déclenchée que lors de la perception d'un seuil de saturation de l'infortune, à partir duquel le groupe dans sa totalité se considère—corroboré en cela par la divination—comme malade (morts en série, maladies persistantes, malheurs répétés).

Ce changement d'état est clairement énoncé dans les paroles du rituel d'initiation: il ne s'agit plus alors de résoudre un épisode ponctuel de maladie, mais "d'éteindre le feu dans la famille", de "refroidir les corps des enfants", de faire en sorte que "les paroles de la famille ne soient que du vent", de "balayer/pe toutes les souillures/*fwɔrɔ* accumulées dans la famille" [31]. Le point d'application du rituel est l'individu qui va prendre, 'attacher', puis 'habiller' le *sādo*. Mais, son champ d'action s'étend à l'ensemble des causalités préinscrites et virtuelles des événements accumulés dans le matrilineage. A cette occasion, des sacrifices sont effectués à chacune des 'places de sacrifice' *tesūngi* du lignage: aux jumeaux, à Dieu, aux esprits de l'eau, aux génies

alliés aux morts, aux fétiches du village, aux ancêtres 'ordinaires' dont le fondateur du lignage et enfin, bien sûr, aux ancêtres *sādoobe*, appelés un à un à commencer par celui que l'initié remplace, pour "transmettre les cendres qui refroidissent" [32] au fondateur du *sādoho* du matrilignage [33].

En bref, tous les agents préinscrits dans l'histoire lignagère sont réactivés, et avec eux les modalités étiologiques qui leur sont éventuellement associées (*yawige* et *yafūgo*). L'ensemble de ces sacrifices est le premier volet de l'opération rituelle qui a pour effet d'actualiser et de 'balayer' les souillures et toutes 'choses mauvaises' accumulées dans la famille. Le second volet consiste à conférer à l'initié les attributs tout à fait distinctifs et fort contraignants de son nouveau statut de *sādo*, qu'il conservera définitivement. Cette procédure évoque irrésistiblement celle du bouc émissaire: tout se passe comme si l'ensemble des contraintes qui pesaient sur le matrilignage—les devins senoufo parlent de 'charges' *tugoro* des fétiches ou des morts [34]—étaient transférées sur l'initié. Ressenti par l'individu comme une sanction et une vie de souffrances—et, pour cette raison, obstinément récusé lors des premiers verdicts divinatoires—le statut comporte une série d'interdits spécifiques dont le plus coercitif est celui de la culture de la terre. Dans cette société de cultivateurs, ne pas avoir le droit de toucher la houe, de s'asseoir sur le tabouret de son mari s'il revient des champs, de marcher sur la terre fraîchement défrichée, etc. . . ., met fortement à l'écart les *sādoobe* des circuits socio-économiques normaux. Également soumis à de nombreux autres interdits, par exemple d'ordre sexuel et alimentaire, ils sont en outre obligatoirement intégrés dans le collège transligner des *sādoobe*, lui-même générateur d'un ensemble de contraintes spécifiques comparables à celles de l'organisation initiatique du *poro*.

Tous alliés aux génies de la terre—dont la fertilité est la métaphore de la fécondité lignagère, et inversement—tous les *sādoobe* ne sont pas de devins. Que ceux-ci soient, par définition, des *sādoobe* montre la coextensivité de la fonction de maîtrise de la causalité et de la position de support de toutes les causalités immanentes à la structure sociale. Il semble que pour les Senoufo, la condition d'une telle maîtrise réside dans la sommation préalable et l'application institutionnelle de leurs modèles de causalité sur celui qui est appelé à exercer cette fonction.

Il s'agit là d'un dispositif circulaire dont on peut déduire une conception générale de la causalité de la maladie fondée sur le principe de la répétition c'est à dire de la conservation: principe qui s'exprime sous des modalités différentes dans les deux institutions qui fondent l'ordre social senoufo: la structure lignagère et l'organisation initiatique du *poro*. L'événement-maladie, conçu généralement—on l'a vu—comme la réactivation d'un événement antérieur, est immédiatement réinscrit et stocké dans la mémoire collective du matrilignage. La machine divinatoire semble avoir ici pour fonction de réalimenter cette mémoire avec ses propres schémas (instances et mémoriaux) constitutifs. Tout se passe comme si le système de la causalité fonctionnait en

circuit fermé, à l'image d'un retour du même qui méconnaîtrait l'étendue et la durée [35].

Compte tenu de cette conception, la question du pluralisme médical se présente alors sous un jour particulier, en pays senoufo. Il convient, nous semble-t-il, de distinguer soigneusement l'introduction de nouvelles alternatives thérapeutiques et de nouveaux modèles interprétatifs. Les nouveaux choix thérapeutiques peuvent aisément se pratiquer sans modification notable du dispositif interprétatif traditionnel. Quant à l'introduction de nouvelles alternatives interprétatives, elle semble ne pouvoir s'effectuer ici que sur le mode de la rupture—dont le *sādoho* fournit le paradigme. Ainsi s'éclairent les véritables secousses socio-médicales qui ébranlent périodiquement le monde senoufo, sous la forme de mouvements prophétiques ou de cultes de fétiches, venus généralement—comme jadis les guerres—du nord, mouvements ou cultes dont le commun dénominateur est le rejet de tous les modèles de causalité traditionnels, notamment des interdits et du *sādoho*.

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4. Gillies E. Causal criteria in African classifications of disease. In *Social Anthropology and Medicine* (Edited by Loudon J. B.), pp. 358–96. Academic Press, London, 1976.
5. Au nombre de 900,000 personnes environ, réparties entre la Côte d'Ivoire, la Haute-Volta et le Mali.
6. Et gustatif: par exemple, *nyūdāhā*/tête douce, sucrée: la chance. Notons ici que les transcriptions figurant dans le texte sont empruntées tantôt au parler nafara tantôt aux parlers fodonon, koufou ou forgeron, nos différents terrains d'enquête. Nous avons choisi d'omettre les tons. Les termes de base figurent dans le lexique donné au début de ce texte.
7. Le terme 'hypothétique' est à entendre ici au sens logique: il désigne une liaison causale de nature conditionnelle, sur le modèle de: 'si p, alors q'.
8. Voir les recherches des spécialistes du monde bantou qui ont contribué à ce numéro, notamment Janzen J. *The Quest for Therapy in Lower Zaire*. University of California Press, Berkeley, 1978.
9. Bibeau G. The circular semantic network in Ngbandi disease nosology. *Soc. Sci. Med.* 15B, 1981.
10. Il va sans dire que 'symptômes' renvoie ici soit à une manifestation organique singulière, soit à un registre symptomatique.
11. Horton R. African traditional thought and Western science. *Africa* 37, 1, 1967.
12. *pinigefōb*, 'créateur' de l'individu: *yirige*, faire sortir, lever, créer; *fōb*, possesseur de . . .
13. D'une manière générale, une grande part de l'anthroponymie senoufo réfère à des mesures de protection contre l'infortune et la maladie.
14. Rappelons, une fois de plus, la récurrence des expressions 'attraper', 'prendre' *tyo*, 'descendre' *tigi*, pour dénoter la dynamique étiologique.

15. En effet, à certains *wara* est associé un principe d'efficacité, *yake*, qui 'attrape' le transgresseur de l'interdit du non-paiement: la conséquence en sera le retour de la maladie ou l'inefficacité du *wara*. On remarque l'analogie de fonctionnement des deux principes *yake* et *juma* (pour les maladies *yawige*): après une transgression (toucher, manger, etc. pour *juma*, ne pas payer pour *yake*) un principe affecte le transgresseur, un symptôme en découle.
16. Pour ne prendre qu'un exemple, le système des *akombo* chez les Tiv du Nigeria est une illustration frappante du codage symptomatologique raffiné d'une hiérarchie d'agents nommés et insérés dans l'organisation sociale segmentaire: un *akombo* étant à la fois un symptôme et une maladie, l'agent qui produit ce symptôme ou cette maladie et l'emblème qui sert de support à son traitement.
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19. *Akiga's Story: The Tiv Tribe as seen by One of its Members*. Translated by East R. Oxford University Press, London, 1939.
20. Quel que soit le lien posé a priori, il nécessite pour le moins une corroboration pratique, d'après Young A. Some implications of medical beliefs and practices for social anthropology. *Am. Anthropol.* 78, 5, 1976.
21. C'est ainsi qu'une même jarre de feuilles (*wara*), ou une poudre (*tîme*), peut servir à soigner indifféremment tous les malades qui se présentent.
22. Comme l'a fait judicieusement remarquer S. Feierman à la lecture de sa première version.
23. *Tobe* désigne la barre utilisée pour creuser les tombes.
24. On remarque que logiquement au moins, une erreur lors d'une des premières bifurcations entraîne l'invalidité immédiate de la totalité de la séquence.
25. Nous entendons ici, afin de lever toute ambiguïté, par 'thérapeutique' l'ensemble des actions qui, pour avoir un caractère magique comme telles, ne se distinguent pas moins des prescriptions divinatoires, généralement de forme sacrificielle.
26. Certes imposée par la problématique qu'il aborde.
27. Données d'un rapport quantitatif du Ministère du Plan de Côte d'Ivoire.
28. En particulier chez les Nafara.
29. Instances et événements s'identifient dès que l'on se place dans la perspective des origines.
30. Comme il est dit, le 'meilleur fétiche' d'un individu est son père défunt.
31. Paroles prononcées lors des sacrifices évoqués plus bas.
32. Dans les rituels senoufo—et plus particulièrement dans l'initiation au *sâdoho*—les cendres connotent le refroidissement, la fraîcheur, l'extinction du 'feu' (*naa*), c'est à dire de la répétition de l'infortune, de la maladie.
33. Qui n'est pas nécessairement le même que le fondateur du lignage car le *sâdoho* du groupe peut être 'gâté' et réinstallé.
34. Une question divinatoire couramment posée aux génies de la terre est: 'cette charge (*tugoro*), où est-ce qu'ils vont la déposer?'
35. Le lecteur attentif aura noté l'homologie entre le principe général de ce système de causalité et celui qui soutient l'enchaînement a priori *yawige*, soit la négation de la linéarité du temps (temps de l'engendrement) et de la séparation des personnes dans l'espace. Nous retrouvons dans cette séquence particulière le modèle de la conservation d'un mémorial (le contact avec l'animal) dont l'antériorité est d'emblée abolie.

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THE CIRCULAR SEMANTIC NETWORK IN NGBANDI DISEASE NOSOLOGY

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Abstract—This paper which relies very much on linguistics, proposes a circular semantic network as an original framework for organizing nosological terms used by the Angbandi of Zaire. Such a framework is presented as an alternative to ethnosemantist and structuralist classifications. Building on this new interpretation of Angbandi nosology, the paper presents in the last section the notions of iconicity and circularity as key features of Angbandi medical science.

INTRODUCTION TO NGBANDI CLASSIFICATION

The basis for this paper is a corpus of over 1000 linguistic terms used by the Angbandi of Zaire to name local diseases. To collect these words, I started from actual disease episodes: individual files were completed for 757 patients treated by one of the 43 healers I was working with, over a five-year period. I recorded in these individual patient files not only the names given to the case at hand by the various healers consulted but also the outcomes of auto-diagnosis, family diagnosis and other pertinent information on naming. Through this method, which recorded the various acts performed by the patient or patient's family in his quest for therapy, I was led to the discovery that names were often changing along the process: sometimes, there was a permanent single name assigned to the case during the whole process, but most of the time, I was confronted with a perpetual introduction of new names for an apparently similar disease problem.

This process of variation in Ngbandi nosological terminology can be grasped easily if one makes a methodological distinction between two orders of reality: the theoretical naming system and the contextual behavioral system. Starting from case studies, I was evidently involved only in the contextual system, composed of specific behavior settings or speech situations. By speech situations, I mean the distribution of disease names, in relation to behavior settings or social contexts in which they are used. The naming system exists only within contextual situations and, for this reason, researchers may have access to the theoretical system of naming only if they collect these terms in the process of actual disease episodes. Pure collection of words, isolated from their context, such as for usual lexicography, is hopeless, and cannot serve as a basis for genuine nosological semantics.

The case studies I recorded during my research involved Ngbandi patients, healers and foreign doctors. The Angbandi, who number about 150,000, mostly live in the northeastern region of equatorial Zaire, where they established themselves progressively about 200 years ago. Their language is classified by Greenberg in the Niger-Congo family, within the

Adamawa-Eastern subfamily [1,2]. The Ngbandi society is a segmentary society, of a patrilineal type (*songò tò*), but it also contains many elements related to matrilineality (*songò tà*), as partially indicated by the political importance of *wò tò* (woman father) in the affairs handled by lineage elders and village chiefs. This bi-linearity is also illustrated by the names given to Ego: his own children and his brother's children call him *tò* (father) while his sister's children call him *tà* (mother). Within lineages, elder males have priority over their younger brothers, but it is necessary to recall the exceptional importance given to the elder sister.

From the point of view of physical and socio-political anthropology, Angbandi form a highly mixed human group: the Sudanese speaking invaders, from the Darfur-Kordofan, have crossed with two other populations, one Pygmy and the other Bantu-speaking, which occupied the invaded territory. There exists today a tri-level social hierarchization, placing at the summit those who possess the greatest proportion of physical characteristics belonging to the Sudan type, and at the lower end, those with more pigmoid characteristics. This social stratification looks so fundamental, that it determines the spatial organization of villages.

From an economic perspective, it is interesting to note that Angbandi give a paramount importance to hunting, while they continue to pick fruits and berries, and to practise agriculture on burned grounds. In the forest zone, around Abumonbazi, where I have worked, the food is rich in hydrocarbons, poor in fats, and proteins are obtained from game, fish and insects, for a rather well-balanced diet. Angbandi around Abumonbazi made contact with Europeans shortly after 1840. An administrative station was created at Abumonbazi in 1910, and a Catholic mission founded in 1913, with schools, dispensaries and plantations. This forest region has given many soldiers to the Colonial Army: among them, President Mobutu Seko Kuku Ngbendu Wa Za Banga. Occidental culture may be seen everywhere in the Abumonbazi region, but its presence is very superficial. Traditional creeds are alive everywhere, as it is shown by the massive presence of traditional medicine and by sanctuaries dedicated to ancestors (*da tòrò*) built up by lineage elders in front of their house.

In terms of their beliefs, great importance is given by Angbandi to the spirits of nature named *tòrò ngú*, water spirits, and *tòrò lindo*, forest spirits, as well as to *tòrò ákótàrá* who are the ancestral spirits. Witchcraft (*li*) does exist, but it is less important than spirits in explaining misfortunes and diseases. Angbandi recognize the existence of great cosmological and historical spirits such as Nzapa, Ketua, Sese, Banga and others, but these spirits are far less active than the former.

The present paper which deals with Ngbandi disease names is divided in three sections. In the first section I will establish the amplitude of the Ngbandi nosological semantic field and discuss theoretical positions held by scholars regarding classification in African nosological systems; in the second section, I will offer my own version of the internal arrangement between significant Ngbandi nosological terms, under the rubric of a "circular semantic network"; the third section entitled "iconicity and circularity in Ngbandi science" will be devoted to a discussion of cognitive mechanisms at work in Ngbandi semantics, and will sketch the main characteristics of medical knowledge and science among Angbandi.

Such a work on nosology relies heavily on linguistics and, for this reason, it is surely appropriate to briefly delineate two important approaches taken by anthropologists in their use of linguistic methods: European structuralism and American ethnosemantics.

Linguistic-oriented anthropologists, either structuralists or ethnosemanticists, have explicitly tackled the problem of naming and classifying at two levels. They first raised the issue of relations between the words themselves, dwelling on methodological devices which elicit cultural principles which organize names and classifications; second, they raised the issue of relations between words, thought and things named, through an investigation of cognitive processes, and more fundamentally, relations between the human mind and external reality. Building on this second epistemological level, structuralist anthropologists have also investigated the deep level of relations between local historical linguistic productions and "unconscious activity of the mind" [3, 4]. In my interpretation of Ngbandi nosological terms, I will avoid the debate at this highly complex level of relations between "conscious content and unconscious forms" and will limit my discussion of Ngbandi disease terminology to the first two levels already delineated.

Structuralists and ethnosemanticists agree on the fact that linguistic terms pertaining to any semantic domain cannot be studied as isolated elements and must be apprehended within a configuration of contrasting relations. While structuralists following Lévi-Strauss insist that these contrasting relations take generally the shape of binary oppositions, ethnosemanticists advocate that terms take place within a multi-level hierarchical frame, based on inclusion and contrast of principles [5, 6]. These two diverging positions regarding terms classifications rely evidently on epistemological assumptions which separate sharply structuralists from ethnosemanticists. In this paper, I will present an alternative to the two main models currently used in the semantic arrangement of words through the 'circular semantic network', and will demonstrate the necessity to build in parallel a

new epistemology which can be characterized by the concepts of iconicity and circularity.

To gain insight into the differential position of semantics within linguistics, I think it useful to recall in this introduction fundamental distinctions introduced by Morris and Carnap between syntactics, semantics and pragmatics. Following these authors, Greenberg writes: "If we include reference to the users of the language, we are in the field of pragmatics. If we abstract from the users of language and consider only expressions and their designata, we have an investigation on semantics. If we abstract also from the designata and study only the relations between the expressions themselves, we have the syntax" [7]. Such an interpretation of semantics assigns a triple object to this science: first, the relationships between linguistic expressions and their external referents; second, the linguistic categories themselves; and third, the non-linguistic referents.

This general program assigned to semanticists can be accomplished following two main pathways: if semanticists structure only words, they limit themselves to a lexical classification; if they look for internal organization between non-linguistic referents, they grasp only the designata classification. Many studies have demonstrated that these two classifications, lexical and non-linguistic, are structured by different principles, making it difficult to bridge parallel classifications. I think personally that we do not yet possess adequate methodological tools to bridge signifiers and signified classifications, and that we must rest content for the time being to build semantic classifications restricted to lexical data. I will therefore limit my effort to lexical structuration, but the words and terms will be couched within behavioral settings, involving linguistic actors and definite speech situations. Through this emphasis on the contextual utilization of words, I hope to build up a genuine semantic structuration.

NOSOLOGICAL SEMANTICS: THE MAIN THEORETICAL POSITIONS

Nosological semantics, as any investigation in semantics, implies a research that must be performed at two different levels: first, identification of the semantic field, including establishment of the field's boundaries, and extensive collection of linguistic terms that belong to the delineated field; second, structuring the semantic field, which implies discovery of principles permitting internal arrangements between words assigned to the field. It is possible to translate more simply these two successive methodological steps in relation to the two fundamental functions of language: to name and to classify.

Regarding the first methodological step related to 'naming', I performed two activities. The first was aimed at the establishment of boundaries for the nosological semantic field. Authors have suggested that medicine does not constitute an isolated domain apart from economics, religion, society or politics, and that they have found traces of its presence in all cultural domains. However this multiform presence across all institutions is generally apprehended through identification of behavioral settings in which a fundamental medical vocabulary, such as disease,

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problem, heal, care, drug, ritual, etc. is used. The lexeme *ngā*, for example, is used in contexts where patients are suffering from a body disease, but also when somebody is faced with problematic life situations, or when the village social life is attacked by an unidentified enemy. The verbal radical *sara* means simultaneously to cure, care, bring back to order, give a full life, and is used to refer to many medical activities. The addition of these contextual markers, in which medical terms are used, permits tracing the nosological domain's frontiers.

As a second activity, I collected, within the identified medical behavioral settings, all the words and terms used to qualify body problems, personal and community life problems or any situation related to lexemes such as *ngā*, *sara*, *pengo* (to clean), *yoré* (medicine), *ngila* (ritual), using methods and techniques of American ethnosemantics, that is controlled eliciting questions aimed at the discovery of meaningful Ngbandi nosological terms without any concern for translation within our Western nosology.

In this process of collecting words for diseases, two mistakes were quite often made by medical anthropologists who worked on African nosologies. The most common mistake relates to the building of the word collection itself: many anthropologists have not investigated in a systematic way within all medical behavioral settings, from which nosological terms could be elicited. Such an incomplete collection of disease names can be found in Warren's work done among Akan Bono of Ghana, even if he has proposed the tremendous number of 1266 Bono words to name diseases. More than anyone else, Warren knew that non-empirical names were abundantly handled during consultations at shrines but my impression is that he deliberately avoided this behavioral setting because his argument sought to prove that traditional Bono medicine was science-oriented [8].

Other scholars—and this is the second mistake—have over-focused on one situational context and entirely neglected others. All medical anthropologists agree, for example, on the preeminence of the diagnostic setting as a primary locus for gathering disease names, but this stress put on one setting only has often led to a distorted picture of nosology. This is for example the case in the Psychiatric Dakar School built up around the late Collomb, Zempleni, Ortigues and others, which has offered only one part of total nosological picture, the most important, but only a part, that which relates to supernatural etiology. To get the whole picture, one must investigate the various settings: the empirical diagnosis of herbalist healers, the psycho-social diagnosis of diviners, the diagnosis of the patient and his family, the usual speech situations on the street among laymen, the more formal conversations concerning a disease episode, and so forth. Nosological terminology can only stem from the convergence of these various sources of knowledge, each one being considered as a behavioral unit.

The second methodological step which concerns classification aims at the production of order out of chaos, at the organization of groupings between terms on the basis of their common and different elements. Since de Saussure, linguists know that language is not a pure listing of terms, corresponding to a list of

things. They rather explain relations between a signifier and a signified, names and things-meant, expressions and designata, within a system in which the value of a term is only constituted by relations and differences with other terms of the language. However not all linguists agree with the fact that a semantic field can be actually systematic and this position is well illustrated by Ullmann: "The reasons why semantics has so far failed to adapt itself to the new perspective are not far to seek. (...) The vocabulary is a loosely organized congeries of an infinitely greater number of elements; its boundaries are fluid and ill-defined; it is essentially open, ready to receive an unlimited accretion of new words and new meanings drawn from the most diverse sources" [9]. Nevertheless, de Saussure's followers insist that structuration between words actually exists and that if linguists fail to perceive it is because they use inadequate methods.

I have already said in the introduction that American ethnosemanticists have proposed a hierarchical framework (paradigm, taxonomy and tree) built on inclusion, exclusion, contrast, similarity between features, organizing the linguistic forms; others like Lounsbury have preferred componential analysis, which often introduces, in my opinion, external dimensions to classify terms: for example, depth, distality, severity and spread, used as criteria by Frake to differentiate 'sores' among Subanum, can surely be interpreted as external dimensions inserted within 'native conceptions' to contrast the terms.

Warren is paradigmatic in his use of the ethnosemantic hierarchical framework. "A specific disease term", he writes, "can be linked individually to each of the higher-level lexemes. For example, a severe boil is a kind of serious disease, is a disease which can affect any person regardless of sex or age, is a disease which can be mortal, is a non-contagious disease, is a spiritually-caused disease, is in the domain diseases" [10]. He concludes in the following way: "Since the system cannot be termed a true taxonomy, a true paradigm or a true tree, perhaps the best label would be to describe it as a paradigm with taxonomy" [10, p. 304]. There is something intentional in Warren's use of a conceptual framework in which linguistic data cannot apparently fit: the Bono nosological system was not taking an hierarchical form, and Warren was obliged to speak about a quasi-tree, quasi-taxonomy and quasi-paradigm. Warren came close to proposing a full revision of the ethnosemantic frame for classification, but he stopped half-way in the right direction.

Other medical anthropologists who worked on African nosological systems have proposed their own versions of disease classifications, along the lines of the main orientations I call etiological, cosmological, culturalist and symptomatic. These, for the time being the most important in the African medical literature, are discussed in terms of their leading proponents' work.

French anthropologist Andras Zempleni has given primary emphasis in classification to etiology. After a systematic search of the way Senegalese Wolof and Lebou name and classify psychiatric disorders, Zempleni has come to the following conclusion: "The traditional Wolof-Lebou knowledge in the realm of

mental diseases...totally ignores the descriptive method and the nosological system. Mental problems are not named or classified according to their nosological manifestations. The etiology which is constituted of four main categories of interpretation forms the only axis permitting classification of mental diseases among Wolof-Lebou" ([11, 12]; author's translation). In relating diseases to four etiological categories, Zempleni has brought something new to medical semantics, but I do not think he is right when he writes that "they ignore totally the descriptive method and the nosological system". He collected disease names related to one precise behavioral setting, that of diagnostic process of diviners, but he neglected other settings in his follow-up of actual disease cases. Zempleni, the best and most innovative representative of the French School in medical anthropology, is right when he considers the etiological axis as fundamental for disease classification, but I disagree with him when he restricts classification to only this one axis. In reality, Zempleni is, more than many other medical anthropologists, aware that any disease constitutes a complex historical process with various stages which comprises, among others, the primary consensus performed by the patient's family, and the secondary consensus as outcome of the consultation. However in his analysis of this process, Zempleni was primarily interested in the patient's and group's experience of the disease and he has not systematically examined the various stages under the angle of nosology.

A recent paper by Louis Mallart Guimera, who worked among the Evuzok of Cameroon, seems to find a way out of this focus on etiology. "Terminologically", he writes, "the Evuzok organize their universe of illness by combining descriptive terms with etiological terms. These two terminological sets constitute two autonomous and complementary frames of reference: autonomous because each independently ordered set designates distinct aspects of illness; complementary because the articulation of both sets is necessary for a complete understanding of any single pathological item" [13]. Two name sets are recognized as existing in two different settings, but there remains the problem of conjunction of these names within a single framework.

Commenting on the descriptive frame of reference, Guimera repeats the ethnosemanticist position: "The descriptive categories are ordered in a hierarchical system whose different levels are related through the principle of inclusion and exclusion which characterizes taxonomic systems in general" [13, p. 375]. The combined descriptive-symptomatic and etiological approach provides researchers with tools that are more adapted to the inclusion of a larger range of disease names used by a population, but there still remains a problem of symptom and etiological name classification within a single comprehensive framework.

There exists among French medical anthropologists a second school that is mainly oriented towards symbolism and cosmology. We find among them Griaule, Dieterlen, Zahan and many others. Imperato, who echoes Zahan [14] without any reference to him, writes: "Within the traditional context, diseases are classified into four categories corresponding to

the four cosmological elements (water, earth, air and fire)...The nosology is more precisely based upon the association which exists between cosmological elements and portions of the anatomy. Thus, the respiratory tract and the skin are associated with the air" [15]. My comment on this cosmological approach to nosology will be short: I do not question the possibility that Bambara use a cosmological frame divided in four parts, to organize the whole external world, including diseases, but I doubt that they reduce all classifications to this single principle.

Orley, a specialist of Baganda medical nosology, has developed an approach which may be called culturalist: "Not only do the Baganda ascribe diseases to certain parts of the body, but they also classify them according to three sets of dichotomies: (1) those that come by themselves and those that are sent or caused by witchcraft; (2) strong and weak; (3) Kiganda and non-Kiganda" [16]. Orley takes explicitly into account, as classification axes, those which emerge from various settings internal to the Baganda culture. Any genuine emic classification must be built along the general features which emerge from the collection of names.

It is necessary to briefly note also the work of many physicians who have worked on African nosology. Gelfand's position on Shona medicine (Zimbabwe) illustrates quite well this restrictive approach: "On the whole, the traditional medicine man is unable to link together the symptoms and signs that go to make a disease and he merely names and treats symptoms" [17]. Physicians generally consider African nosography to be a list of disorganized visible symptoms; I must however add that a few physicians following the psychiatrists Prince, Fabrega and Kleinman had nice insights which contributed very much to the development of comprehensive studies on African traditional nosology [12, p. 208; 18].

At the end of this review, I think it useful to note that not a single medical anthropologist has so far, to my knowledge, applied systematically the structuralist method to African nosological systems. However an investigation on semantic structuration cannot avoid this theoretical framework which was used with success by Lévi-Strauss for classifying terms in different semantic domains [19]. Traditional societies, indeed all societies, rely in their cultural classifications, according to Lévi-Strauss, on contrasts between polar terms, in other words on binary oppositions. Structural linguistics used by Lévi-Strauss was severely criticized for its reductionism of the classification process to a binary structure (for example, by Leach's argument [20]). Nevertheless, *The Savage Mind* by Lévi-Strauss remains, after almost twenty years, one of the most stimulating books for anthropologists interested in semantics, whatever the domain they investigate. Binary oppositions which form the fundamental classification principle are surely active in many classifications, but there is no reason to think that they are the only one. The above presentation of main theoretical positions, with respect to naming and classification in African nosological systems, should be taken as a necessary introduction to the alternative I will introduce in the next section, alternative which slowly developed from the analysis of actual names assigned to diseases by the Angbandi.

THE CIRCULAR SEMANTIC
NETWORK AS FRAME FOR
NGBANDI NOSOLOGICAL TERMS

During my stay among the Angbandi, I collected over 1000 disease names on the basis of case studies: 757 patients were actually treated by healers and I recorded the names given to the cases, at all steps of the health seeking process. However in the following demonstration, I will limit the examination of this extensive linguistic material to 23 names assigned by the Angbandi to skin diseases [21, 22]. This limited collection does not necessarily include all the lexemes utilized by the Angbandi for skin diseases, but the sample appeared to me sufficient to give a basis for my demonstration. I repeat here that this approach, from the inside of the culture, combines linguistic data with behavioral settings.

My first discovery, very early during fieldwork, was that a disease was given many different names, each one being related to a specific disease aspect and used within a particular speech situation. For example, the Angbandi call the very same dermatosis:

- *ngã pòrò* because it is a disease (*ngã*) of the skin (*pòrò*);
- *nzibo* because the sick person's skin looks like that of a pig variety (*nzibo*), common in the area inhabited by the Angbandi;
- *sara* to signify that there is itching (*sara*);
- *ngã so* because this dermatosis is said to be caused by sweat (*so*);
- *ngã nzapa* because the disease is considered as natural or sent by a great spirit (*nzapa*);
- *ngã wa bi* when people refer to a supernatural cause like witchcraft (*wa bi* meaning man of the night).

Other words are also used in different contexts for the same dermatosis. After a close examination of the 23 names given by the Angbandi to skin diseases, I discovered that the selection of Ngbandi nosological terms could be explained by four fundamental principles; however, this category of diseases, namely the skin diseases, does not fill all the principles of nomination currently used by Angbandi to name the diseases and this is the reason why I will give brief examples borrowed from other categories of diseases to illustrate the principles which are not active in naming skin diseases.

Before coming to the presentation of the principles of nomination, I think it useful to repeat that I am not discussing here problems of relations between words and external referents, disease names and diseases, but rather the identification of the intellectual procedures actually involved when Angbandi name diseases. This inquiry situates the investigation at a primordial point, that of the genesis of vocabulary and more precisely, that of active epistemological principles, at play in the culturalization of the semantic domain of pathology.

Six principles appear to explain the origin of words used by Angbandi to name diseases:

The principle of localization

This intellectual procedure exists in any culture: you name the disease through the part of the body

mainly affected by symptoms. *Ngã pòrò* (disease of the skin) is an example of this first principle. The apposition of a diseased body part name to the general lexeme *ngã* forms a system of prenomination, which indicates generally boundaries of a micro-semantic domain, as in the case of skin diseases.

The principle of resemblance or likeness

The disease name is that of an animal, a plant or thing. The intellectual procedure operating in this case is more complex than in the localization principle: the domain of diseases is articulated on the non-medical by the mediation of similarity between two things. This form of naming is rooted in the gaze which establishes a connection between characteristics present in the symptom, and something else already known by experience. Before discussing at large the logical processes at work in this mode of naming, it is essential to illustrate by examples the two ways this principle acts.

(a) The disease is named after an animal or a vegetable which has in common with the disease at least one feature:

	Animal or vegetable name	Western nosological term
-67 <i>ndimò</i>	orange	(yaws)
-81 <i>ngbòngò</i>	electrical fish	(urticaria)
-99 <i>nzibo</i>	pig	(dermatosis)
-108 <i>singa</i>	fish with scales	(itch on legs)

(b) The disease is named after an object or a thing which has one common element with the symptom:

	Thing or object name	Western nosological term
-9 <i>hoqòzò</i>	oval heap of cassava	(bilateral parotiditis)
-21 <i>gangu</i>	hillock	(hip rheumatism)
-51 <i>loqòza</i>	distension	(inguinal hernia)

This second possibility, which compares a disease with an object, produces no word in the domain of skin diseases probably because analogies with animals and plants are more vivid and spontaneous in this category of diseases. The resemblance principle explains the origin of about half of the disease names which form the Ngbandi nosological system. The majority of these terms are generated by symptoms and belongs therefore to the "organic spatialization of the disease" described by Foucault in *The Birth of the Clinic* [23]. The body horizon constitutes the departure point for the naming based on the resemblance principle but there is more: this principle expresses one of the fundamental modalities Angbandi use in their epistemology, that of iconicity. I will examine closely this Ngbandi epistemological assumption in the last section of this paper.

The principle of representation

Representation is built upon a deeper level of abstraction than resemblance, and its presence bears witness to the existence of complicated analytical procedures in the naming of diseases. While, in iconic thinking, the sequence comparison-identification between two distinct elements is essential, the mind which 'represents' organizes its whole activity around

the disease itself, which is no more understood in its relation to environment as it is the case in resemblance, than with body in localization. The specificity of the intellectual process under consideration lies in its permanent anchoring into the symptom itself which is analyzed: the outcome is a name which always presents a certain degree of abstraction.

A few examples will illustrate how this principle functions. We know that *sara* means itchiness, and that all itchy diseases, even a filariasis which is not primarily a skin disease, are called *sara* by the Angbandi. This word cannot be identified with a disease image, and I think more accurate to consider it as the product of an elementary analysis. It is clear that the resemblance which constitutes the more fundamental modality of thinking among Angbandi has not entirely disappeared in the representation, but representation is surely the foundation for a new knowledge space.

The representation principle is sometimes at work in a complex fashion in the naming of diseases: for example, the Angbandi name leprosy *ndiba*, which refers literally to a knife (*ba*) that is no longer sharp (*ndi*). In using this composite word, the Angbandi indicate that a leper's skin may not recognize a sharp instrument when applied to it. Many other examples exist of diseases named after this principle in areas outside of skin diseases, but the two preceding cases are illustrative.

The principle of etiological reference

Many diseases are given a name issuing from an etiological category related to their genesis and development. A dermatosis, for example, may be called *ngã so*, when sweat (*so*) is considered as a causal agent, *ngã ngü* when skin problems are related to baths in dirty water (*ngü*), *sã* when dermatosis is produced by lice (*sã*), etc. When the speaker wants to insist on a natural cause, he names them *ngã nzapa* which means disease sent by the spirit *nzapa*.

The same principle is at work in cases of non-empirical categories, like *ngã torô*, for diseases sent by the spirits at large, *ngã wa bi*, which serves to name diseases due to witchcraft. This second set of names is directly linked with the main interpretation systems recognized by Angbandi as active in actual disease cases. This principle has been identified by most researchers working on African nosological systems, but I said earlier that many, among these, restrict their interpretation of nosology to this one and only principle.

The principle of therapeutic reference

A small proportion of diseases are also named after a treatment applied, but there is no example of this principle among skin diseases. I will limit the illustration of this principle to two clear cases: the stiff neck or torticollis which is given the name *ngã kè tò*, because the healer uses a spear (*kè tò*) to cure this disease; the swelling of the breast is named *monyâlê*, because only the husband's sister (*monyâlê*) is authorized to take care of her suffering sister-in-law.

The principle of socio-cultural imperative

This last principle does not find an application in the domain of skin diseases. It operates in a complex

fashion, because the name selected is deeply rooted in cultural values. *Sôke*, for example, is a severe child disease, which is said to have occurred because the child's parents have resumed sexual relationships too early after their child's birth. Angbandi say that the secreted impurity contracted by the parents is transferred on the body (*huringo nyingambi*) under the public form of a disease. In this case, the sexual taboo is not used to name the disease as in the other principles of nomination; the socio-cultural imperative gives rather existence and meaning to a disease which can actually be named in different ways.

Anthropologists know that all diseases are ultimately rooted in the culture but, when I speak about the socio-cultural imperative, I refer to something else: I mean that few specific diseases borrow their existence from a precise cultural habit or belief. One more example to illustrate this principle: when Ngbandi mothers become aware that there is a delay in the fontanel closing of their child, they say that he is suffering from *kpmi*. For a physician, such a delay can be considered as a normal process, but not for the mothers who are anxious and very careful to note any sign of respiration appearing on the top of the head. There is something cultural in this attitude of the Ngbandi mothers.

The six principles presented above do not permit an explanation of all words utilized by Angbandi to name skin diseases and one must look somewhere else to find the origin of residual terms: *lê* (48), *ngête* (81), *ngonzá* (85), *sû* (111), *yangba* (125) and *zôzombô* (132). Among these terms, a few were borrowed from other languages during a long process of acculturation, others have changed with time and people have forgotten their initial meaning, others may be linguistically arbitrary. Whatever the hypothesis for explaining residual terms, the six principles give us a sufficient insight into 95% of the Ngbandi nosological vocabulary, to be considered as main processes underlying the production of words in the Ngbandi language.

I come now to the second function of language, classifying words on the basis of differences and identities. A common mistake made by the promoters of various theoretical approaches to classification is their attempt to organize collected pathological terms in reference to only one classification axis (symptomatic, etiological, cosmological), generally within the ethnosemantic framework.

In my opinion, there exists no discontinuity between naming and classification, and words must necessarily be organized inside a multi-dimensional framework. Each one of the six principles presented in Fig. 1 indicates a direction, from a disease itself:

- (a) by localization, the disease is located inside the body and person;
- (b) by resemblance, the disease is assigned a place in the environment, besides animals, plants and things;
- (c) by representation, the disease is considered in itself as a complex set of signs;
- (d) by etiology, the disease becomes part of the entire causality system;
- (e) by socio-cultural imperative, the disease is explicitly linked to certain group values.

Localization	Resemblance	Representation	Etiological	Reference	Therapeutic reference	Socio-cultural imperative	(Residual terms)
			natural	non-empirical			
ngā pōrō	(67)* ndimō	(54) mbao	ngā nzapa	ngā wa bi	(31) ngā ké tó	(111) sōké	(48) lē
	(80) ngbōngō	(66) ndiba	(86) ngā ngú	(122) tōrō ngbō	(63) monyāké	(37) kpmī	(79) ngbōngō
	(99) nzibo	(100) póporo	(87) ngā ngú ti li		(These 4 illustrative terms do not belong to skin diseases semantic domain)		(81) ngéte
	(108) singa	(105) sara	(103) sá				(85) ngonzá
		(112) tanga tēre	(109) ngā so				(111) sú
		(125) yangba ti legō					(125) yangba
							(132) zōzombō
Body and person	Environment	Symptoms and signs	Causes		Treatment	Cultural values	
Naturalistic perspective			Holistic perspective				

* The number between brackets after the disease terms refers to the numbers assigned to diseases in a glossary published in 1978.

Fig. 1. Principles of nomination for skin diseases.

This multi-dimensionality can be better expressed through a diagram that represents, at the same time, the unity of each name assigned to a disease, as well as interrelationship among several names. Such a diagram cannot be constructed according to the ethnosemantic pyramidal structure; the only possible pattern will have to be circular.

I call this diagram a 'circular semantic network' a term adapted from Good's 'semantic network' [24-26] as a promising alternative to the ethnosemantic model. I have added the idea of circularity, which is not explicitly developed in Good's approach. Any disease is expressed in Ngbandi language by a network of names which are used in different settings to refer to various aspects of the disease.

Only the 'circular semantic network' can visualize this approach which implies continuity and discontinuity between names. Any disease can be located in Ngbandi thinking at a circular roundabout, which serves as an arrival and departure point for many roads, through a circular linking road. The representation of the global Ngbandi relation of diseases is made possible by the circular network which links names. The genuine figure of a disease can therefore only be pictured through the full collection of assigned names, and through the interrelations of individual names designating specific aspects. In the description of a nosological system, a researcher is not allowed to block out one, two or more ways giving access to the circular roundabout and to pave another, like a highway, making it more important than the rest of the network. Scholars who stress only symptoms or etiological categories, are driving along only two roads, and their rejection of other network segments disrupts the multi-dimensional framework used by traditional peoples in the domain of diseases. The real meaning of a disease comes from a conjunction of all terms.

I apologize for the use of an analogy, with a traffic circle, but I have not found a more persuasive dia-

gram to express my alternative to the hierarchical ordering proposed by ethnosemanticists.

The circular semantic network presents a form of multi-dimensional spatialization allowing integration, without any confusion, of all the dimensions of a single disease; in other words, the Angbandi link the empirical dimensions expressed by the three first principles with other dimensions like causality and culture, but in such a way that they maintain an antagonistic tension between, on the one side, a necessary rupture, and on the other, a mutual inclusion within a larger framework. There is simultaneously a disjunction and an articulation, which I have illustrated through the idea of a binding point, occurring at the junction of roads, on a traffic circle.

In proposing as a general frame for classifying diseases among Angbandi a circular model which is drawn from Roman-European traffic patterns, I acknowledge that I introduce a model totally foreign to the Ngbandi lifestyle. I have looked for other diagrams which can translate the same idea of "circularity involving concurrently rupture and continuity" but all the models I have examined—the cross-roads, the clover-leaf, the spider's web—could not say more than the traffic circle. I agree that an indigenous picture of this semantic network drawn from Ngbandi lifestyle could be more adapted, but I have failed in my effort to find such a picture.

Figure 2 presents the arrangement of diseases in Ngbandi nosology. However, I must admit that the proposed classification is limited, since it does not give any information on the internal ordering of words, related to each principle. Many terms are generated by the localization principle and I must evidently propose a classification for these words. Such a classification probably exists, but to build it, one must adequately grasp Ngbandi anatomical conceptions. Skin diseases constitute one of the easiest cases, which avoids the examination of difficulties involved in the study of ethnoanatomy. I am con-

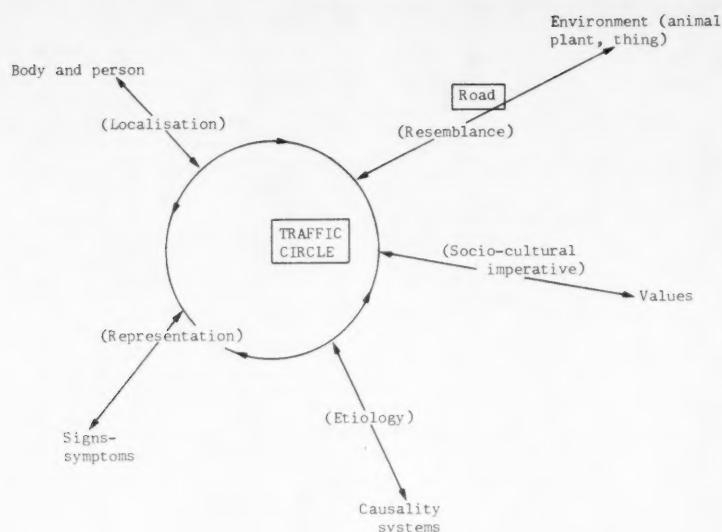


Fig. 2. Circular semantic network as a classification framework.

vinced that a well-designed research can really make explicit the Ngbandi body concepts and, in turn, the arrangement between words linked with localization.

At first sight, one can say that there exists no classification among words based on resemblance. Theoretically, no limit can be assigned to this naming process: all animals, fishes, plants, things are available, and sometimes two or three different names may be given to one disease, which share a common element with each of the things compared. It is surely possible to formulate the hypothesis that classification among words based on resemblance reproduces the semantic arrangement within the particular botanical or zoological domain from which words were extracted. Data collected so far go against this hypothesis but research must still go on. I have already noticed that women's diseases are more frequently associated with fish while men's diseases are named after animals. This pre-classification still says nothing and one must investigate within Ngbandi classification of fish and animals. Even if a researcher has grasped this ethnozoology and ethnoichthyology, there is no reason to think that the classification can be reported within the domain of diseases. Such a transposition would imply, to be valid, that a fundamental homology crosscuts all domains of reality, as it is advocated by structuralists.

To introduce the analysis, in the domain of symptomatology, it can be said that the principle of representation apparently paves the way to a systematic sub-classification. I recall the cases of *ndiba* for leprosy and *sara* for itchy diseases. Such a classification would exist if all diseases were examined systematically, in reference to certain variables, and if names were assigned on the basis of presence or absence of selected variables. This is, to my knowledge, not the case. Words which represent diseases are the outcome of an analytical process limited to the disease under consideration, without a comparison with other diseases. We are still very close to thinking by similarity and the existence of a sub-classification has still to be established.

Words based on etiology may be distributed within a basic binary classification: naturalistic and non-naturalistic diseases. It is probably possible to form groups within the various categories of natural causes, but an in-depth study would require a perfect knowledge of relations Angbandi entertain with the external world. With respect to terms related to non-natural causes, the problem is easier: division among them corresponds to the main Ngbandi etiological systems: spirits, witchcraft, magic, ...

Sub-classifications can exist in the six name categories presented, but researchers still have a lot to do in unveiling these organizations. In this section, I have limited my discussion of Ngbandi medical semantics to fundamental organizing principles. Ngbandi disease names were presented as labels which assign a single disease to many classes, and if the reported names were numerous for the same disease it is because this disease belongs simultaneously to a series of classes.

ICONICITY AND CIRCULARITY AS KEY FEATURES IN NGBANDI MEDICAL SCIENCE

A previous section has made clear that Angbandi use multiple names for reference to a given disease object. In order to explain this procedure, a reasoning may be found in the negotiated and contextual understanding of disease interpretation prevalent among Angbandi. In this process of negotiation with the disease, Angbandi successively or concurrently give multiple names, which not only denote multiple domains of reality, but also movement of the diseased person within various socio-cultural settings. In more formal terms, disease meanings for Angbandi can be presented as an emergence from a nexus of words relevant to various contexts, or otherwise, as the addition of multiple terms. This conclusion, to which I came upon an examination of Ngbandi nosological vocabulary, substantiates, among many context-oriented positions, the Bloomfield theory of meaning

as totally explicit in a situation, and Wittgenstein's aphorisms on words as defined solely by usage.

In the present section, I will try to elicit the main features which characterize the Ngbandi medical paradigm, by describing how the paradigm is made explicit in the way Angbandi name and classify diseases. To achieve this aim, it is useful to start with three general conclusions on the scientific status of nosology, conclusions which I drew from data already presented in former sections.

First, it is quite clear that Ngbandi disease terms actualize a multi-dimensional disease concept which appears as a complex construct built upon elements borrowed from biology, ecology, sociology and psychology. Any disease is evidently a biological event, but biology forms, among Angbandi, only a foundation upon which a disease cultural construct is built; other aspects, such as environmental elements, beliefs, causality systems, specific behaviors, are used in the making of this cultural construct. The circular semantic network presented in Fig. 2 must indeed be read as an illustration of this cultural and multi-dimensional Ngbandi disease construct, through the medium of a circular image. Put in other words, one can say that disease is simultaneously, for Angbandi, an experience in the life of individuals and groups, a threat to order and good health, a set of environmental referents, and sometimes an occasion to gain access to non-empirical realities. I have listed, in Fig. 2, main disease dimensions, such as they are conveyed by the linguistic terms themselves. This list seems sufficient to grasp a disease model prevalent among Angbandi.

Second, this circular semantic network forces us to postulate the existence among Angbandi, of a holistic medical theory, which contrasts sharply with Western bio-medical theory. If one tries to transpose this holistic medical theory, within a vocabulary of spatialization used earlier in this paper, and borrowed from Foucault, one is led to the conclusion that Ngbandi medical theory needs at least three levels to be adequately represented:

- (a) an organic space for the body living within a physical environment;
- (b) a psychological space for the individual or group, who experience the disease episode;
- (c) and a socio-cultural space, which locates the disease event within a meaningful framework.

I now refer explicitly to a vocabulary of multiple spatializations, within Ngbandi medical theory because most of the debate around the holistic model in medicine has been couched in such terms: by what means can the holistic model bridge the gap between 'bio-medical' and 'psycho-socio-cultural' dimensions? Numerous medical anthropologists have proposed a comprehensive framework, which articulates biological on cultural data, of which three have especially brought new insights during the last few years.

Kleinman proposed to follow "the symbolic pathway of words, feelings, values, expectations, beliefs and the like which connect cultural events and forms with the affective and physiological" [27]; Good advocated the necessity to build new medical semantics. This "understands the meaning of medical language to be constituted in relation to disease as semantic networks, configurations of symbols and

experiences mobilized in social interaction and deeply integrated into the social and cultural structure of a society" [24, p. 54]. These authors have drawn attention to the systematic relationship which exists between the social, psychological, cultural and biologic factors involved in disease construction. According to these researchers, access to this systematic relationship must pass through semantics and symbolism.

Fabrega, on his own, has proposed a framework which views illnesses first as culturally elaborated social episodes, and second, as biological events. "The existence", writes Fabrega, "of medical taxonomies and systems for dealing with illness in all groups points to a universal cultural trait, what one might term a language of illness. (...) One is allowed to claim that illness is first of all a social form—a creation of human social groups—and secondly that it has biocultural significance—it constitutes a behavioral trait that has proven of great value to human groups" [28]. Implicit in Fabrega's position is a well-known distinction between biomedical knowledge, about the occurrence of a disease, and culturally influenced social behaviors, which are associated with this, and which constitute an illness. To articulate the biomedical disease perspective on the socio-cultural construction of an illness, Fabrega has proposed a "multi-level scheme of socio-biologic interactions" which is not totally foreign to the 'circular semantic network' I have personally presented.

Indeed, my model relies very much, not only on Fabrega, but also on the Good and Kleinman models, with which my circular network shares many features. The originality of my model lies fundamentally on the one hand, within the circularity, which permits simultaneously conjunction and disjunction between various elements, and, on the other hand, within the permanent anchoring of linguistic data structure on the vocabulary itself.

Third, the way Angbandi name and classify diseases implies specific cognitive processes. I cannot, of course, examine closely all problems related to links between language and thought and will therefore limit myself to an examination of the two main characteristics that emerged as fundamental from Ngbandi nosography, that of iconicity, which explains about half of disease labels produced by a principle of resemblance, and that of circularity, which refers to a fundamental Ngbandi ordering of reality and is translated in this paper with the expression 'circular network'. I have also demonstrated for example, how Angbandi use abstraction in naming diseases, through the principle of representation, but I will not examine this cognitive process, because it does not seem as fundamental as the two previously presented. Readers must be aware that those two language structures, iconic and circular, to which I refer, characterize only partially Ngbandi epistemology, which, in reality, is far more complex. I want to stress here these two cognitive processes, because they generally were overlooked by other researchers, in their study of African medicine; the examination of these cognitive procedures is necessary to discover the main features of African Science.

What then is the meaning, for the constitution of medical science, of Ngbandi thinking, according to an

iconic epistemology? A French science philosopher, Foucault, has closely examined this problem in his study of the Western epistemology which prevailed up to the mid-seventeenth century, and was characterized by a science built upon the principle of resemblance. Foucault writes: "The experience of language belongs to the same archeological network as the knowledge of things and nature. To know those things was to bring to light a system of resemblances that made them close to and dependent upon one another; but one could discover similarities between them, only in so far as there existed, on the surface, a totality of signs forming the text of an unequivocal message. But then, such signs were no more than a play of resemblances, and they referred back to the infinite and necessarily incomplete task of knowing what is similar. In the same way, although the analogy is inverted, language sets itself the task of restoring an absolutely primal discourse, but can express that discourse only by trying to approximate to it, by attempting to say things about it that are similar to it, there bringing into existence the infinity of adjacent and similar fidelities of interpretation" [29]. In simpler words, any science built on iconicity appears as the discovery through observation of similarities and differences, which exist among things.

Many authors have already noticed the presence of 'iconic thinking' in non-Western societies, and they have brought forward various explanations in order to account for this form of thinking, and concomitant science: among authors, a first place must be assigned to Lévy-Bruhl, who looked for an explanation in the idea of participation, between man and external reality. This position was rejected because Lévy-Bruhl had qualified 'primitive thought' as a reality qualitatively different from Occidental thought. Other authors have come closer to a genuine interpretation of this particular form of thinking: Lévi-Strauss has insisted upon 'concreteness of the logic', as a primary form of discursive thinking in all societies which would only be maskedly more prevalent in traditional societies; Price-Williams [30] has, on his part, contrasted concrete and abstract modes of classification which exist concurrently in primitive societies; Fernandez [31] has referred to the notion of metaphor, as a fundamental mode of thinking in what he calls expressive cultures; numerous others have amply demonstrated that 'iconic thinking' is a universal attribute of the human mind, which is just more active in certain societies.

The iconic dimension of Ngbandi epistemology is not, in my opinion, different from ours: this way of thinking is actively involved in the popular scientific paradigm which exists in our modern societies, parallel to the academic scientific paradigm. If we compare closely this fundamental mode of thinking within Western and Ngbandi societies, differences appear not in cognitive processes themselves, but rather in the words used by both cultures to name diseases. Socio-environmental factors, belief systems and body concepts differ, here and there, in such a way that connection, among similar things, cannot follow the same pattern in both settings. For example, Angbandi live in a forest ecology while we live in industrial cities: in this context, disease names referring to animals are normal for Angbandi. However,

these names will probably disappear if the Angbandi eventually come to live outside of their forest ecology. New words will probably develop in accordance with the new setting. The iconic cognitive process may not change during this passage but one thing is sure: linguistic products will radically be altered.

Historians of science have demonstrated that Western thinking is built around the elaboration of reason, and that only a very marginal place has been left to 'thinking by resemblance', which was obliterated, and finally invalidated within scientific culture. Such a permanent process of occultation has made intellectuals suspicious of a possible scientific status for iconic thinking. This is why I insist on a necessary rediscovery of validity, within this fundamental thought process.

I come now to a second feature of Ngbandi science: circularity. By this, I refer to Ngbandi use of multiple reference systems, in the process of naming diseases. Each of these reference systems is being connected with certain behavioral settings. Principles of localization, resemblance, representation, etiological reference, therapeutic reference and socio-cultural imperative were presented as a certain number of discontinuous points, located successively on a circle, and giving access, as a totality, to the naming of one single disease.

Medical anthropologists, familiar with the corpus of African literature on this problem will probably ask if my semantic circularity is, in some way, analogous to Horton's "converging causal sequence" and Turners's polysemy of symbols. The model I have designed shares a few common features with Horton and Turner models, but there are important differences to be made, as I will now show.

I agree entirely with Horton when he writes that many anthropologists, unfamiliar with the theoretical thinking of their own culture, have failed to recognize African equivalents, simply because they have been blinded by a difference in idioms. African science is much more than a common sense thought, and the theoretical model which structures this science is not substantially different, according to Horton, from the Western scientific paradigm: both paradigms appear as a quest for unity underlying diversity, for order underlying chaos, for simplicity underlying complexity, but, in this explanatory quest, African thought and Western science use different idioms. More thoroughly than Horton, I have examined in detail one idiom, that of disease, and demonstrated how disease entities are interpreted within various contexts which finally embody the whole culture and ecology. There is, however, a consonance, between Horton's viewpoint and mine, which can be expressed in Horton's own words: "I suggest that, in traditional Africa, relations between common sense and theory are essentially the same as they are in Europe. That is, common sense is the handier and more economical tool for coping with a wide range of circumstances in everyday life. Nevertheless, there are certain circumstances that can only be coped with in terms of a wider causal vision than common sense provides. And in these circumstances, there is a jump to theoretical thinking" [32].

However, when Horton leaves the exploration of features common to Western science and African

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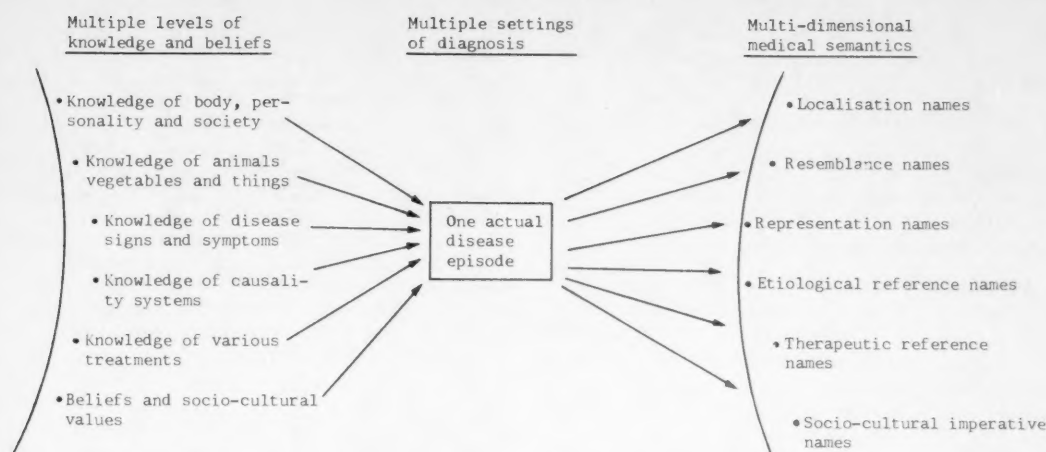


Fig. 3. Multiple diagnostic settings and medical semantics.

thought, and moves into an enumeration of differences, I feel embarrassed by the realization that theoretical thinking, to which Horton refers, is a simple duplication of the logical model presented in 1944 by Gluckman [33]. This would not be what is usually meant by theory in science. My interpretation of contents put by Horton under the expression 'theoretical thinking' can also be reinforced with a close examination of Part II of his paper presenting African thought as a closed system, and Western science as an open system. In reality, Horton considers the 'wider causal context', which he said to be characteristic of any theoretical thinking, as a simple set of alternatives to which people refer in their understanding of any fact; these alternatives would be less numerous and also less elaborate in African thinking, as compared to Western science.

From this interpretation of African thought, as a 'closed system', Horton has drawn two conclusions with which I disagree entirely. First, Horton asserts that people sharing the African traditional way of thinking are unable to imagine possible alternatives to their established theories and classifications; in saying that, Horton does not deny the essential rationality of traditional thought, but stresses the fact that intellectual activities, within a closed system, function with respect to a limited number of possible choices. The material I brought in this paper regarding numerous points of reference used for Angbandi disease interpretation, essentially contradicts Horton's position. My feeling is that Ngbandi medical nosology is built on a series of alternatives which envisions a much wider scope than what may be true of Western medical nosography.

My second disagreement with Horton deals with his conception of causality in African medical science. In drawing a parallel between the work of a traditional African diviner and of a Western diagnostician, Horton has rightly pointed out that many antecedents ($x^1, x^2, x^3, x^4, \dots$) may produce a same consequence within the traditional scientific closed paradigm, while one antecedent produces a sole effect, within the Western scientific open paradigm. Horton has well described the 'converging causal sequences' scenario, and how a choice is made by a diviner in

actual cases: "Faced with a theory postulating several possible causes for a given event, and no means of inferring the actual cause from observable evidence, divination goes, as it were, 'over the head of' such evidence. It elicits a direct sign from the realm of those unobservable entities that govern the causal linkages it deals with—a sign that enables it to say which of the several sequences indicated by the theory is the one actually involved [32, p. 170]". This means, in clear language, that a diviner can choose any antecedent to explain an event, without destroying the system. There is something fundamental missing in Horton's rationale: the notion of situational context and behavioral setting, as presented earlier. In reality, a converging-sequence type theory would point to a definite and specific causal verdict, within a precise context, and we must relate this process to actual settings in order to know how it works. To continue with my dialogue on Horton, I would have to apply this notion of situational context to divination, but will rather illustrate (Fig. 3) how the contextual setting works within the building of Ngbandi pluridimensional medical semantics.

Horton is right when he says that a diviner chooses a singular causal sequence from several potential sequences for one actual disease event, which can be referred to by the diviner, on the basis of certain indicators, either as caused by spirits, by witchcraft, or magic. This argument, brought forward by Horton, suggests a much more fundamental intellectual process: in certain contexts, there is no choice in naming a disease. For example, if one names a skin disease in the context of localization, resemblance or representation, there will be no choice, and one will necessarily use the ascribed terms. As soon as a diagnostician locates his naming within a particular reference system, he loses the opportunity to choose a sequence, among several potential sequences. I wrote earlier that alternatives exist in African scientific paradigm, but these alternatives must be found at the level of a choice among multiple reference systems for naming purposes.

To bring more light to iconic and circular features of the Ngbandi scientific paradigm, I think it useful to compare very briefly my model to Turner's interpreta-

tion of symbol as polysemic. According to Turner, the semantic ritual structure possesses two main attributes:

(a) multiple meanings: actions and objects perceived by senses in ritual contexts convey several meanings, and

(b) unification of apparently disparate significata: essentially distinct significata are interconnected by analogy, or by association in fact or thought.

Each ritual symbol has multiple referents, but only one, or a few referents, are drawn to attention, in one particular setting, in such a way that the full semantic wealth of a symbol may only be deployed in many cultural and operational contexts. The selection of a given meaning, from the total semantic assemblage, is essentially a function of the setting.

"The semantic structure of a dominant symbol", writes Turner, "may be compared with a ratchet wheel, each of whose teeth represents a conception or theme. The ritual context is like a pawl which engages the notches. The point of engagement represents a meaning that is important in the particular situation. The wheel is the symbol's total meaning" [34]. I have applied to nosography this approach outlined by Turner, and it is not a surprise that my conclusions are consonant with his interpretation of ritual symbols. My originality lies not only in ethnographic data I brought forward, but also in a certain systematization of ideas on iconicity and circularity which can be found, in a simpler form, already present in Turner's model.

As a conclusion to this section, and to this paper, I wish to come back to the parallel existence of many classes or contextual settings in the Ngbandi nosological field. To understand this multiplicity of classes or categories, in reference to one single thing or event, I think that we have to qualify the ontology which the Angbandi refers to. My impression is that they do not reify diseases, in using names with an ontological content, and are much more prone to a phenomenological description of reality. Bastide, who was facing a problem close to mine, faced with numerous words used by Africans when they name a person, has proposed to call this logic of African phenomenological relation to reality, a logic of attribution. "The unity of one individual", writes Bastide, "can be translated by a formula, which enumerates various species to which he belongs; this is the reason why one individual receives many names, each of them setting him within one of these categories. The names do not produce the personality, they are only the markers which identify the reference to classes, and if there are many classes it is only because an individual enters within a series of different classes" [35]. What Bastide wrote regarding names assigned to actual individuals is probably valid in the case of actual disease episodes. If it is so, I have to admit that Ngbandi thinking is much more practical and phenomenologically-oriented than ours. This orientation of their thinking process could explain why they use many classes in their interpretation of any phenomenon.

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nent field investigators worked on the site during this whole period. Research for this study was supported by Social Science and Humanities Research Council (Canada) under grant 3902-5039-4893, and by a grant allocated by the International Development Research Center (Canada) to the Zairian National Institute for Scientific Research, in which I was currently working as research director. I am grateful to Dr J. Tremblay, M.D., M.S., for an extensive review of the manuscript and helpful suggestions at earlier stages of development; warm appreciation is also expressed to my wife, E. Corin, Ph.D., for her constructive comments at all stages of the manuscript. Finally, I thank J. M. Janzen, Ph.D., for his very incisive remarks regarding the last part of this paper on "key features in Ngbandi science".

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KUTAMBUWA UGONJUWA: CONCEPTS OF ILLNESS AND TRANSFORMATION AMONG THE TABWA OF ZAIRE

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Abstract—Beginning with the description of a single instance of problematic illness, this paper moves toward the comprehension of Tabwa therapeutics by placing them in their most complete conceptual context. Decisions made regarding methods of treatment, the loci of therapy (both physical and social), and the means of assessing therapeutic effectiveness reflect an epistemology which includes the overlapping domains of physiology, diagnosis, divination and religious and magical practices; domains whose different contents are nevertheless tightly interwoven by a relatively small number of underlying principles. The articulation of these principles makes clear that Tabwa concepts of illness and transformation form a coherent whole within which both traditional and European medicines take their appropriate and complementary places.

In Tabwaland, as elsewhere, the medical system exists and is experienced not as the discursive, analytic prose of the specialist or the observer, but rather as the narrative or saga of specific illness occurrences, episodes which cut to varying depths across the normal flow of life. For this reason, it is perhaps appropriate that we begin our study of Tabwa medical thought with the telling of one such tale. Embodied within it are the concepts of process, of materiality and of transformation which underlie not only the medical system, but also the definition of reality itself. Through an examination of these, we will be able to accurately locate within the epistemologic system the therapeutic alternatives from among which BaTabwa regularly choose [1].

KAPUTA'S DAUGHTER'S ILLNESS

Early in 1977, Malaika, the three-year old daughter of a close friend, Kaputa, developed two fluctuating swellings on the back of her head. These first emitted pus, then developed lesions which would not heal. During the course of the succeeding months Malaika's parents, her extended family, and my husband and I applied all the therapeutic means at our collective disposal in an attempt to effect cure. Creams, ointments, and penicillin injections were alternated with the application of powdered plant substances and herbal washes, but to no avail.

By the end of six months' time, Kaputa and Kalwa, his wife, were beginning to ask themselves what sort of illness could be so resistant to treatment with both traditional (*ya nchi*) and European (*ya Kizungu*) medicines (*dawa*). Though they felt they should seek divinatory insight into the cause of their daughter's affliction, they postponed doing so because the illness was not life-threatening and they had many other social and financial obligations.

In June, 1977, I acquired some capsules of tetracycline, and, with these, again attempted treatment of Malaika's illness. After five days, the pus and swelling stopped; and though the medication ran out shortly after this, by the end of the month the child's lesions had closed.

At about this same time, however, Malaika began to have other symptoms. Every morning upon awaking, she would begin to scratch, and swellings would appear all over her body; sometimes especially affecting her eyes and face. Though the swellings would disappear after an hour or so, the itching would remain, a sequence of events characteristic of the illness *masoli* ('urticaria' or 'hives' [2]). In addition, Malaika began suffering nocturnal fevers which were so severe that they caused mild convulsions (*kustuka-stuka*) and prompted her parents to sit up all night (*kuksha*) watching over her.

Though the fever would remit during the day, the child's temperature was never normal, and my initial efforts to treat the fever with chloroquine were only partially successful. This limited response, coupled with the presence of the hives and the character of the fever led me to eliminate malaria as a possible diagnosis and to instead suspect that Malaika had contracted bilharziasis when visiting her mother's natal village in the mountains [3]. My diagnosis was all but useless, however, for the dispensary was without medicines, and I myself had none of the niridazole required for treatment.

On July 6, 1977, a message was sent to Kaputa while he was at our house, to the effect that Malaika had just been stricken with 'convulsions' (*ndege*) while playing at home. What he found when he got there was that his daughter had suffered a series of particularly violent shudderings or tiny seizures which had been controlled on the spot by his mother, who had used the traditional medical treatment of throwing herbal infusions over the child with a broom (*kumusampula*). Against the background of Malaika's ongoing nightly fevers, this incident precipitated Kaputa's decision to seek divination immediately, and also to search the village for itinerant traders who might have niridazole to sell or to exchange for dried fish.

By the next day, both problems had been fortunately resolved. In the afternoon, Kaputa had located people down from Kalemie who were selling niridazole at a price which, though expensive, was still within his reach. He bought ten tablets, and began

administering them to his daughter that night, following the dosage indicated by my physician's manual.

In the evening, Kaputa decided upon a diviner and sent him the 'arrow' necessary to begin the process of divination. In choosing a diviner, he employed at least two significant evaluative criteria. First, he selected the type of divination (*Tulunga*) considered to be the most accurate and the most likely to reveal deadly etiologic agents such as avenging ghosts and sorcerers. Second, he selected a practitioner to whom he was unknown and who was himself relatively new to the village of Mpala. In this way, Kaputa structured the situation so as to increase the veracity of the diviner's insights into his case, for, as he told me, numerous seances with the same diviner or seances with a person who knows one tend to result in the repeated emergence of a few problems, while the real causes of the illness remain unknown.

The 'arrow' (*mshale*) by which the divination was begun was a small coin (a one-likuta piece), which had been placed on the ground and prepared by invocations made first by Kaputa, then by Kalwa. In their statements, each of the pair had cited all possible causes of illness (adultery, thievery, breach of familial obligations, quarrels with neighbors, etc.), and instructed that the cause, whatever it might be, present itself to the diviner for the sake of the child's health. Though such invocations have a standardized structure, their statements were nevertheless direct reflections of the many and complex relationships of which Kaputa and Kalwa were part, each of which might have been the precipitant of their daughter's affliction. After its preparation, the 'arrow' was given to the diviner, who placed it at the head of his bed and, during the next two nights dreamt of the cause of Malaika's illness.

On the morning of July 9, 1977, Kaputa, Kalwa and I went to the diviner's together. As is customary with *tulunga* divination, a pot of freshly-drawn water was prepared and set to boil, and when it was hot, a *lukusu* seed was dropped into it by the diviner. For some time the practitioner completely ignored us and concentrated on the oracular device. He silently questioned it, intently scrutinizing the steaming pot as he shook his rattles; then plunging his hand into the boiling water and retrieving the seed each time the oracle's answer was no. Finally, he gave us a parable and then a pronouncement which ended in a question.

He said that in his dream he had seen a woman whose husband had died. She had not been inherited by a successor, but another man had nevertheless entered the house. Then a third man had come, the two men had fought, and the woman was also beaten. Kaputa and Kalwa were to apply this to themselves and their families and to determine who these people might be.

After some discussion the young couple revealed that the features presented by the diviner corresponded to the situation of Kalwa's mother. When Kalwa's own father had died, her mother had been given a successor, as is the custom (*bupyani*) in Tabwaland. However, when this man died, his lineage group had refused to provide the widow with another, saying that she was destroying their line. Others claimed that the husband had been killed by an

avenging ghost (*kibanda*) deriving from his family's own evil deeds, and that they were abusing Kalwa's mother in an effort to conceal the truth from the outside world. Eventually, the widow was inherited by a man from another, related lineage group; but, as Kaputa put it, he came "like a thief in the night", performed the necessary ceremony and then left, leaving the widow improperly cleansed.

Shortly after this, Kalwa's mother began to have episodes of 'lunacy' (*wazimu*). These were attributed to attacks upon her by the avenging ghost made under the mistaken impression that she was still attached to her deceased husband. Her children sought redress of grievance from their paternal kinsmen in court, but were denied it because they lacked sufficient political weight in the village. Privately the judges told them that they had justice on their side though they could not be openly granted it. During the succeeding months, Kalwa's mother's condition worsened, until she finally became incurably mad. Harmless, she wandered from village to village, sometimes living with Kaputa and Kalwa, sometimes staying with others, and sometimes sleeping out of doors, naked and isolated from the intercourse of reason.

With the completion of the progress of their mother's illness, rupture in relations between Kalwa's group of siblings, their lineage group, and their affines was such that juridical resolution became impossible. The only release from the avenging ghost was therefore to be sought in the ceremony called "throwing the person in the bush" (*kumutupa mutu mupori*). In this, the diviner would mediate between the afflicted group and the etiologic agent responsible for their sufferings. Much of the short discussion after the diviner's pronouncement was devoted to consideration of the details of this therapeutic alternative, and to the ways in which it might be carried out.

After the seance concluded, I spoke with Kaputa about the diviner's hypothesis, and found him to be in essential agreement with what the practitioner had said. Such a result had been obtained years before after the death of his first child. At the time, Kalwa's step-father had admitted to having an avenging ghost, but had refused to do anything about it. Since then, however, other problems had intervened, and had been repeatedly cited by local diviners as the cause of illness in Kaputa's house.

Kaputa and Kalwa thought to consult with her siblings, to go with them to another diviner, and, if the same result was obtained, to undertake the ceremony. This, however, was going to take a minimum of some weeks. In the meantime, the effect of the pronouncement itself, were it accurate, would be the remission of Malaika's symptoms. When Kaputa returned to our house that evening, he brought with him the news that Kalwa had arrived home to find Malaika playing, and with her skin cool for the first time in weeks.

For presentation here, this episode has been denuded of much of its detail. Nevertheless, in this, the skeleton of its barest structure, are visible many of the principles that shall be explored below. In his hypothesis, the diviner brought together into one explanatory whole many different domains or levels of experience. These included the nature of the illness itself, both as physiologic symptoms and as an event occurring in the life of a three-year-old child. Included

as well were the personal history of that child's parents and grandparents; and a category of etiologic agent which contains implicit within itself a prognosis and a non-bodily therapy.

This interweaving of illness, history and etiology is more than the simple coordination or correspondence of somewhat disparate factors. Rather, the varied domains are tightly interconnected by an epistemology which constructs/explains reality on the basis of certain significant premises. Among those are:

(a) the transposition of a single process from one experiential domain to another (e.g. physiologic, social, physical, verbal, etc.);

(b) an emphasis upon the unique event as that which has special communicative power, and the concomitant privilege accorded to the witness whose understanding unites with clarity what other's blindness leaves unconnected;

(c) a relation between hidden processes and manifest appearances such that the latter can be construed as artifacts of the former, artifacts which are, nonetheless, the only means by which these processes can be known; and finally

(d) the concept of time as developmental process and ideas specifying a complementarity of relations among words, events and objects in such a processual reality.

Each of these can be examined more completely in relation to a different aspect of the Tabwa medical system as a whole.

CONCEPTS OF ANATOMY AND BODILY PROCESSES

The concepts of anatomy which form part of the Tabwa medical system include not only the delineation of external body parts, but also the itemization of internal organs and the specification of their functions. For BaTabwa, organs work in relative isolation from one another, and do not constitute structures organized into systems which operate as wholes. In addition, organ function is primarily of significance in discussions of the body as atomized and as in a state of health. With the exceptions of the spleen (*safura*), whose enlargement causes 'anemia' (*kukosa damu*), and 'dropsy' (*safura*), and the heart, whose rapid beating indicates critical illness, BaTabwa do not consider that organs can function pathologically or be subject to attacks by disease. Conversely, the vocabulary of pathology employed in the Tabwa medical system is drawn from the domain of nature, and the human body considered as a whole or thought of in illness can be said to occupy an intellectual space that is in some sense quite different from that occupied by anatomy *per se*.

The important, normal bodily processes of hunger and gestation result from the actions of the two "snakes" (*nyoka*) or "insects" (*wadudu*) which occupy the body of every human being. Though these creatures are essential, they are also capable of pathologic action. It is they who cause certain types of abdominal illness and reproductive difficulties. Others of their kind are responsible for inflammations of the limbs or joints, some of which result in permanent disability. Though the image of the 'insect' BaTabwa effectively conceptualize a series of transformations

which are simultaneously systematic in their progression and yet alien to the consciousness and/or well-being of the person in whose body they exist.

In other medical settings, particularly those which have to do with the preparation of herbal medicines, strong analogies are made between the body and trees. The upright stance of the one is comparable to the vertical position of the other; feet, torso and head correspond to roots, trunk and branches respectively; and the runners or roots by which some plants propagate offshoots are comparable to the umbilicus which is both the materialization of a woman's fertility and the cord uniting one generation of people to the next.

Further, several important deviations from health are directly attributable to the entrance into the body of cold, external winds (*pepo*). Certain types of dizziness (*zungu-zungu*) and diarrhea (*kuendesha tumbo*) are the results of cold winds entering the abdomen via the anus and the fontanels, respectively. Fever (*homa*) is due to the penetration by the wind of one's pores, a penetration one senses as the chills or coldness (*baridi*) which precede the onset of the hot stage of the illness.

Finally, digestion and coitus constitute bodily processes whose functions have complementary meanings in Tabwa medical thought. In contrast to other Bantu groups, such as Gikuyu and Zulu, for whom digestion functions as a model of ritual and social transformations [4,5], BaTabwa regard the process as the archetypal reduction of something to nothing. When someone has expended the usefulness of an object or has illegally diverted funds for his own benefit, he says he has 'eaten' the thing in question; and this brings to an end others' efforts to retrieve it. Similarly, people often underscore the futility of selfishness by pointing out that food is ultimately nothing more than 'feces in the bush' (*mavi mu pori*) and therefore not worth denying another. Finally, the latrine is a waste place into which magical medicines and amulets may be thrown, that their powers be irreversibly neutralized.

The amoral, profoundly transforming capacity of coitus stands in sharp contrast to the mundanity of digestion. Uncontained, as in adulterous sexual relations, coitus can cause mortal illness of infants and the death of women in childbirth. Similarly, excessive conjugal intercourse, or intercourse begun too soon after the birth of a child can result in a reversal of the child's normal developmental processes, occasionally leading to death. Coitus must also be isolated from certain "hot" (*moto*) illnesses, such as "measles" (*suruba*) and "smallpox" (*ndui*) and others, such as "lunacy" (*wazimu*) and "epilepsy" (*kifafa*), whose progress also must be carefully kept on its most benign course by means of medicines. In addition, cultural transformations such as beer brewing, potting, and the manufacture of oil from peanuts and/or sesame seeds must be protected by abstinence from coitus if they are to yield satisfactory results.

Finally, coitus that is ceremonially 'framed', as it were, i.e. intercourse that is either interrupted or performed under special conditions, results in the fabrication of 'new' cultural entities. In their first sexual contact after the birth of a child, a husband and wife perform a ceremony by which the infant is "matured" (*kumukomesha*). To accomplish this, they practice coitus interruptus with the infant between them. The

parents than arise with the child, administer to him a warm infusion of herbal fertility medicines and tie around his waist a protective string which has been dipped in these medicines. By means of this procedure, the child's body is closed to disruptive environmental forces, and becomes capable of responding to treatment with medicines fabricated by those who have had sexual relations the night before.

Similarly, in the *bupyani* ceremony whereby a widow or widower is cleansed of the coldness deriving from the death of the spouse, the transformation is accomplished by ceremonial intercourse between the survivor and a kinsman of the deceased, after which the couple may remain married or separate, as they wish. Without such a ceremony, the survivor may not approach a fire, may not wash with hot water and may not marry again.

With the practice of incest (*kisoni*), individuals employ ceremonial intercourse to fabricate amulets which will bring them great wealth. Such an amulet is first compounded by a practitioner, then taken home by the client who has intercourse with his sister or daughter in the presence of the object. The amulet is then returned to the practitioner for completion. The use of incest in this way is an act of sorcery.

Coitus, then, is the physiologic analogue of fire. Uncontained by the bounds of marriage and disciplined abstinence, coitus works to the detriment of bodily integrity and of cultural processes involving the use of a controlled amount of heat. In this respect it is comparable to the destructive burning which can be the result of a fire that is out of control.

Inversely, by appropriate control and containment, the power of coitus can be prevented from the short-circuiting of other, more delicate cultural transformations, that these come to successful conclusion. Beyond containment, it can, as ceremonial intercourse, have its power directed toward purely cultural ends. Similarly, fire's capacity to burn can be controlled through the use of objects such as pots and media such as water or oil, that its transformative capacity be fully directed toward the fabrication of new entities. Connecting the two affecting powers is the warmed water set out in the evening by a woman for her husband when she desires him, and the warmed water that it is a husband's prerogative to receive every morning upon arising.

In the biosocial domain, as well, there is a structure of relations comparable to that which obtains for fire and coitus. Health is an unmarked, balanced state in which an individual "feels nothing" (*hasikii kitu*) other than hunger. The apertures and boundaries of his body are closed to alien environmental forces, and he suffers no excess of either cold (as chills [*baridi*]) or of heat (as fever [*homa*]). With illness, the situation is reversed. Bodily integrity deteriorates as symptoms become ascendant. With the ending of life in critical illness, the body becomes cold and the blood stops circulating, while the pulse becomes rapid and weak. Death is an extinguishing (*kuzimisha*) of life, and those who have been tainted by it must refrain from contact with fire or with hot water until they have been appropriately cleansed.

Life, coitus, and fire are thus transformative powers which are identified with one another in very important ways. They take the *shapes* of entities but are

really *processes* whose materializations as the body, semen, and the flame, are not the static, reified objects they might seem to be. Instead, each contains a constant potential for transformation and self-transformation, making the unmarked or steady state a fundamentally dynamic condition.

The manifest continuity of the imagery of bodily events with that of natural occurrences has a similar effect. What goes on inside a human being is not different in kind from transformations unfolding without.

Hence, one can meditate on the ordered processes of nature, and thus come to know something of physiology. Inversely, one can meditate upon bodily events and come to know something of the world.

DIAGNOSTIC CATEGORIES AND DIVINATION

The Tabwa medical system provides some 203 diagnostic categories in terms of which specific instances of illness can be described and classified. Of the total, approximately 26 can be distinguished as simple categories, corresponding superficially to the 'symptom' of the Western biomedical system, and referring exclusively to a single, physiologic deviation from health (e.g. coughing, fever, chills, nausea, etc.). The presence of any one of these is sufficient to constitute an instance of illness; and inversely, deviations from a normal state which do not fall into one of these categories are not instances of being sick, but are "conditions" (*hali*) (e.g. blindness, crippledness, pregnancy).

Simple diagnostic categories can be combined and recombined as necessary, to generate a complete description of a given illness occurrence. For this reason, they tend to form the pool from which presenting complaints are drawn. Finally, simple diagnostic categories make no reference to temporal sequence. Symptoms are either present or absent, and there is no necessary order to their successive appearances.

In contrast to these stand complex diagnostic categories. These superficially correspond to the 'syndromes' of Western biomedicine, but include in their composition features of the illness drawn from domains other than the exclusively physiologic.

A complex category may include reference to such features as the age and sex of the patient, his activities immediately prior to the onset of the occurrence, the pathology of the illness, its prognosis, and the alternate forms its progress may take. Where simple diagnostic categories appear to be the terms in which illness is given shape, terms which can be applied by anyone, the classification of a given instance of illness into a complex category is often a matter of some speculation and requires an expert opinion. Similarly, complex categories are not generative, and cannot be used to create 'new' descriptions of illness. Rather, an occurrence which does not display all the features of a given category may fall 'between' categories, and be difficult to diagnose as a result.

The pattern established in Tabwa concepts of anatomy and bodily processes is thus continued here. Just as events unfolding within the body were identified with events occurring without, so do the very

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terms in which disease is conceptualized function to wed the physiologic to the social circumstances and characteristics of the patient. Beyond even this, as well, is the problematic illness for which divination is sought, an occurrence such as the one affecting Kaputa's life.

A problematic illness is an occurrence of any kind which displays one or more of three characteristics:

- (a) it threatens the patient with permanent disability or death;
- (b) it is unintelligible (i.e. it falls 'between' diagnostic categories); and
- (c) it is unresponsive to treatment.

Any of these features is sufficient to prompt questioning as to the etiology of the occurrence, and, for BaTabwa ultimate causes lie not in his physiology but in the patient's social-historical circumstances. Divination is the only means by which etiology can be known, and it is regularly sought, as with Malaika's convulsions and fever, when an illness is life-threatening. Illnesses which are merely unintelligible and/or unresponsive to treatment, such as the swellings on the back of Maliaka's head, do not require immediate investigation, though eventually some effort at deciphering them should be made.

When they have decided to divine, people have before them several alternatives of varying accuracy and expense. Regardless of which one they choose, the procedure by which the investigation is set in motion is the same: there is first an invocation (*kulandila*) of the 'arrow' in which the cause of the illness is commanded to present itself to the diviner, which is then followed by a seance in which a diagnosis is presented. As we have observed in Kaputa's case, the diviner's hypothesis ties together the nature of the illness (both physiologic and social), the history and circumstances of the patient and his kin, and one of the four different etiologic agents that are responsible for all problematic illness occurrences.

Of importance to this discussion is the profound communicative significance accorded to the unique event by the structure of the divinatory or oracular system. This significance has two domains: that of the problematic illness itself and that of the means by which it is deciphered or recognized.

First, the problematic illness, as described above, is an atypical or unique event, defined in the Tabwa medical system as the embodied and muffled communication of an etiologic agent such as an ancestor (*mzimu*), a spirit (*pepo*), an avenging ghost (*kibanda*), or sorcerer (*mlozi*). In this capacity, problematic illness has the privilege of precipitating what I have elsewhere called a "moment of concluding", a period in which the patient and his kin meditate upon the combination of *circumstances* and *meanings* which together constitute an individual's personal identity, i.e. what he knows to be true of himself. In this developmental restructuring of the self, the process of divination and the discursive authority of the diviner (i.e. his right to define the patient's circumstances) both play important roles.

For BaTabwa, then, problematic illness is only superficially a punishment or an attack. At a more profound level it is, in its uniqueness, the indicator and potential revealer of significant truth. It is a mess-

age that is 'unintelligible' (*haijulikani*) because it is said in the symptoms afflicting the body. When the message is made explicit in the diviner's words, the nonce communication unfolding in the body can cease and the patient begin to show signs of improvement even without further modifications of his physiologic therapy.

On the second level, that of divination itself, the unique event takes the form of the coincidence. Not only are the plausibility and elegance of the diviner's hypothesis determined by the extent to which he effectively correlates circumstances occurring in three different domains (the physiologic, the social, and the spiritual), but the very hypothesis itself is often revealed and/or validated by the coincidence that is the voice of the oracle.

Whether it be the diviner's dreams—whose contents are governed by the instructions made during the preparation of the 'arrow'—or the throwing of divinatory bones or objects, or the brewing of oracular beer, the converging epistemologic implications of the process are both clear and deep. First, the communicative significance of the unique event proposes a relation between the hidden and the manifest which is such that knowledge of this relation can be obtained and validated without the intervention of mathesis (i.e. a mathematically based evaluative grid). Second, the definition of coincidence as an event of special discursive fullness gives particular epistemologic emphasis to the witnessing eye. BaTabwa make the point more succinctly when they say that a diviner is like the laboratory technician at a clinic. Just as the technician examines one's blood, urine and feces under the microscope and sees there parasites not visible to the naked eye, so does the diviner employ his special vision to see into one's affairs and discover there causes of illness to which a lay person would be blind.

The two optical images are important for our understanding. A microscope magnifies structures directly, rendering them accessible to vision and comprehension while maintaining their sanctity and uniqueness. So does the oracle in the divination cut directly to the heart of the problem, transcending the limits of normal insight and defining the particular illness occurrence without reference to an intervening network of crosscutting, statistically determined typical cases.

In addition, BaTabwa consider that the diviner's special power inheres in his vision (*mumacho yake*). Practitioners are said to 'have eyes' (*kuwa na macho*) which enable them to see what others do not. Lay people, in contrast, are 'blind' (*kipofu*). They go about 'like children' (*kama vile watoto*), with only the most superficial understanding of the nature of events. It is in his capacity as witness that the diviner is able to put into a meaningful whole circumstances and happenings which might remain unconnected, but for the capacity which lies at the center of his forehead and governs the way he sees.

What is being said here is that reality has a fluidity and an interactive quality that accords to the eye a status at once profound and powerful, for it is only under the gaze that an event assumes its truest nature. This nature derives from hidden 'meaning' which for all its relative obscurity is nonetheless of the same

order as the manifest events themselves, and takes as its shape such things as human motives and social rules.

RELIGIOUS AND MAGICAL PROCESSES

If the diviner's special vision enables him to witness the connection between the hidden and the manifest, his transformative powers enable him to manipulate it. For each of the four etiologic agents which may cause problematic illness there is an appropriate non-bodily therapy—a therapy which is directed not toward the patient's physical person, but toward the social relations in which he exists. The restoration of order in social relations which have been disrupted, and the realization (i.e. manifestation) in social life of the meanings which previously have been obscured within it are both processes which are essential to the patient's recovery. The four types of ceremony accomplish their aims in two complementary ways.

Ceremonies performed on behalf of ancestors (*mizimu*) and spirits (*pepo*) derive their particular shape from the nature of the beings with which they are concerned. Ancestors and spirits are those whose intent is the meaning hidden within a given situation. It is they whose will governs the ultimate outcome of the unfolding events, whether good or ill. A principal aim of ceremonies relating to them is the containment of their transformative power and its translation into words. Both of these are processes essential to the restoration of appropriate communications between these beings and men.

With *mizimu* the containment is accomplished through the establishment of a small shrine. The process is initiated by the brewing of ordinary corn and millet beer (*kibuku*) which, in this instance, is transformed into a communicative device by means of an invocation (*kutambikia*). At the outset of the brewing, the ancestor is called upon to express its will through the medium of the beer. A potent drink indicates that it is, indeed, the ancestor named who is responsible for this illness and that this being is willing to enter into special relations with the patient. Beer which spoils constitutes a negative response and necessitates another divination.

Similarly, with *pepo*—possessing spirits whose arrival in Tabwaland dates from around the thirties—the diviner's hypothesis must be confirmed by the spirit itself. At a ceremony called 'arranging the spirit' (*kutengeneza pepo*), the afflicted individual (or his representative) is 'mounted' by the *pepo*, which then speaks through him to state its name and to specify the benefits it has come to confer.

What occurs in both these cases is the use of a material medium (the beer and the body) to realize an intention which is not otherwise directly or immediately accessible. Whether passively or actively, the will of the ancestor or of the spirit is given verbal articulation by means of this medium and is thus both made manifest in and contained by the wider social situation in which it was previously disruptive. If the communicative/transformative structure employed in these ceremonies is effective because it provides a vehicle by which the hidden can be made real, the structures employed to govern the two deadly types of

etiologic agent are effective because they obscure what is manifest.

As we saw in Kaputa's case, a potentially fatal connection to an avenging ghost can be severed by a ceremony called "throwing the person in the bush". In this, the patient and his family go to the bush at night and in silence. There they meet the diviner who washes them with medicines which function to convince the ghost that it has already killed its intended victims and that the people leaving the site are 'nothing' (*bure*) to it.

When an illness is caused by sorcery the connection between the sorcerer and his victim can sometimes be severed by the fabrication of an amulet (*erisi*). Called *mwanzambale*, the amulet is composed of plant and animal substances (*miti* and *vizimba*, respectively) and functions to protect the patient in several ways. It transforms the patient's appearance in the eyes of those who would attack him, making them see him kindly or with indifference. It also conceals the patient from those who came to harm him and prevents their magical medicines from crossing his path. Finally, it also reflects back to the sender whatever misfortune he may project toward the patient.

With avenging ghosts and sorcerers, then, the material medium (i.e. the medicinal infusion and the amulet) is a realization of the intentions of men. Activated through invocations (*kusemelea*) spoken over them by the practitioner, such media both deploy human will in a social setting and give to that will proximate power over the wider situation. The power bestowed by amulets and infusions derives from changes they effect in the eye of the beholder. Threatening beings are held at bay by a process in which the manifest is made obscure.

Underlying and defining the effectiveness of these two types of non-bodily therapy (i.e. the religious and the magical) is the complex interconnection uniting words, objects and events. It is by means of this that the relationship between the hidden and the manifest can be manipulated and the circumstances of the patient's life be gradually shaped to a given end.

In Tabwa thought, the power of words lies in their ability to processualize reality. In the single moment of their utterance, words unite past and future, tying them together with articulations of causality and of intention. In so doing, speech, like life, fire and coitus, causes a thing to mature (*kukomesha*), to make manifest within itself the process by which it attains the fullness of its being. Speech is associated with continuity and with the east, the propitious direction from which the sun rises, and the dead return to be reborn. It is also associated with culture, with human consciousness, and with the transcendence of becoming over being. Like light, into which the voice (*sauti*) of a person is transformed at his death, speech makes things and people into what they really are.

Yet for all their ability to make simultaneously accessible past, present and future, words are highly ephemeral. Their totality exists only in the moment of their saying; and to objects falls the task of synchronizing their temporality—in the case of religion, or of temporalizing their synchrony—in the case of magic.

Thus, through the medium of beer or of the body, objects make manifest the will of ancestors and spirits which might otherwise be known only by its un-

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mediated, instantaneous effect upon unfolding events. For ancestors and spirits, according to Tabwa thought, act directly. Their words *are* deeds.

Inversely, as magical infusions and amulets, objects function to preserve the worlds generated in the images of diviners' invocations. Such statements cause the amulets 'to mature' (*kukomaa*), and become tiny microcosms (*kadunia*) of the world. Thus activated, they maintain the vitality of the client's intentions, while his thought returns, as it inevitably must, to the more pressing and pragmatic circumstances of ordinary life. In this way do amulets form things like holes in time, through which can be seen the clear intent of practitioner and client, however long ago it may have been expressed, and however obscured it may have been made by the force of intervening events.

Events, for their part, are diachrony itself. Composed as they are of the interweaving of meaning and circumstance, of intention and chance, they are the embodiment of history. In them are hidden processes first obscurely indicated, then clearly revealed. In them as well can one decipher the ultimate will of the ancestors, and determine the extent to which one's own proximate will shall prevail.

The three entities of this transformative complex—words, objects and events—can thus be said to be variations of one another. What can be expressed or created in one can be brought into being in another, yet each has an entirely different constitution with respect to time, materiality and space. In the non-bodily therapies which are crucial to the Tabwa medical system, transformations of events are attempted by aligning in the desired way words and objects. If one does this, BaTabwa say, and God is willing, the circumstances themselves will also conform to the pattern.

CONCLUSION

This discussion of the Tabwa medical system was begun with the description of a particular case. In it, recourse was made to both European and traditional medicines, and to the process of divination. Subsequent consideration was devoted to the exposition of principles which were present, though tacit, in the case as given; and which are deeply rooted in Tabwa concepts, not only of illness and health, but also of anatomy, bodily processes and non-bodily transformations. Kaputa's decisions about his daughter were thus placed against a background of widening circles of comprehension. In this conclusion there will be a discussion of some of the widest domains of conceptualization, and then a return to the center, to the case, to accurately locate Western medicine within a total epistemologic context.

In our consideration of the principles which underlie the theory and practice of medicine for BaTabwa, we have been led to concepts of the transposibility of symptoms, events and words; to ideas about transformation, and to thoughts about the relationship between the material and the meaningful in the unfolding of events. Beyond all of these are Tabwa ideas about time and about change, as these relate to the body and to health and illness.

Despite the presence and extensive use of clocks, calendars and radios, there is an important respect in which time is not measured by BaTabwa in terms of minutes, hours and days ticking off at a fixed and relentless rate. In an environment where mechanization has not made overwhelming inroads into the conceptualization of life, time may be defined as a sequence of coincident processes, all of which give way to one another in a regular and regularly moving order. Thus it is that the smoke of the dry season's bush fires rises to the sky where, people say, it forms the clouds which bring the rains of October. So, too, does the moon grow fatter and fuller as it moves from west to east, only to wane there, before returning, slender and rejuvenated to the west. Human beings participate, as well, in this process. One is born, matures and dies only to be reborn to a kinsman, or to be 'rejuvenated' in the memory of oneself that is an infant namesake.

Within this broader unfolding also occurs the enacted or embodied time of which individual experience is composed. Its progress can be measured by the gradual clearing of a substantial field, by births of one's children, and by major events such as the deaths of one's close kin. In such a setting one is perhaps less *in* time than time is in oneself; identified with change, time comes into being in large measure by means of one's own activities and efforts, even when these are coordinated within an agricultural cycle. Such is the case at least when one is healthy and one's determination is one's action.

In illness this relationship of experience to time is disrupted, indeed, is reversed. The passage of time is 'felt' by one whose illness divides his will from his ability, and leaves him 'without self-mastery' (*hajiwezi*), as people emphasize when speaking of serious illness. Time is doubled, as household members sit up all night (*kesha*) watching by the side of a sick kinsman, and determining the hour by the position of the Milky Way (*kipinda busiku* or "that which turns the night"). People will often say that someone was ill for three days, then correct themselves to indicate that it was really six, because it was three days and three nights.

Further, illness brings to bear upon the family of the patient the pressure of time speeded up. Instead of basing their choices upon their own necessities and convenience, people must move to the pace set by the progress of the disease. Procrastination can result in an illness which has become so serious that no practitioner would be willing to treat it, and it was with the danger of their daughter's fever in mind that Kaputa and Kalwa moved rapidly to seek divination.

In a situation such as this, then, time is change, and the body—or the material substance of a thing—is but the artifact of the processes that are time unfolding, blossom-like, from within it. In health, these go all unnoticed, but in illness, process becomes identified with deterioration and time becomes the product of the 'Other' that governs the progress of the disease.

Modification can be effected from without, as when non-bodily therapy changes the context in which a patient lives as well as from within by means of traditional and European medicines; and it is here, in the relatively restricted domain of physiological therapies that BaTabwa distinguish between *dawa ya*

kizungu (European medicines) and *ya kinchi* (medicines of the land).

Each of the two has a distinctive form. Pills, injections and liquid medicines characterize the first, while the latter comprises plant and animal substances derived from the bush. Though its principal loci are the dispensary and the hospital, European medicine may also be obtained for itinerant merchants and fellow villagers, as was the niridazole that Kaputa purchased. The Tabwa medical system includes a body of lay knowledge governing the use of European medicines, and this is known to virtually every adult in much the same way as every adult knows at least some of the traditional medicines that are readily available in the area.

While each type of medicine has its strengths and its weaknesses, what is more to the point of this discussion is the fact that both are *subordinate* in the same way to the broader epistemologic concerns that give the Tabwa medical system as a whole its meaning and vitality. Thus it is that Kaputa, his wife and his family could freely alternate between traditional and European medicines and never feel that the utilization of the latter necessitated the entry into an epistemologic system whose underlying principles were fundamentally different from their own. Instead, their approach to Malaika's illness combined a pragmatism which would permit the use of any physiologic medicine that would work with a meditative concern that sought to structure the divination in such a way as to obtain the most veracious insights possible.

In his essay on the form and meaning of magical acts, Tambiah suggests that "it is fundamentally mistaken to say that African religion and ritual are concerned with the same intellectual tasks that science in Western society is concerned with" [6]. While successful treatment is measured in both Europe and Africa by the effectiveness with which symptoms are made to remit, our discussion of the principles underlying the Tabwa medical system would indicate that success in it means something entirely different from success in a Western hospital. The Tabwa system, for all its use of European medicines, is essentially directed toward the alleviation of suffering as a fact of human experience. If it accomplishes this task by causing the remission of symptoms it is doubly successful; but the totality of its concerns is such that the persistence of symptoms is no measure of its failure.

Any medical system must fail to heal each of its constituents at least once in his life; hence, as important as the restoration of physical wholeness is the elaboration of a system of meaning, partly personal and partly cultural, which can expand to encompass the vicissitudes we experience and thus make sense of them. Though remission of symptoms remains the

ultimate confirmation of a diagnosis, for BaTabwa "to recognize the illness" (*kutambuwa ujonguwa*) is to understand and speak about more than physiologic circumstances.

In the Tabwa medical system, the body holds the position of a defile or conduit through which flow and are united the mass of events that are the raw material of a patient's history and the several etiologic agents which serve as anchoring points, giving structure to the flow of circumstance and transforming it into meaningful narrative. This is the task to which the Tabwa medical system rises and toward the fulfillment of which it directs even the use of European medicines.

REFERENCES

1. The material presented in this paper derives from four years' field research (1974-1977) undertaken among the Lakeside Tabwa of Shaba, Zaire. The Tabwa are a matrilineal virilocal people who live primarily by farming manioc and fishing the rich waters of Lake Tanganyika. They are culturally similar to their southern neighbors the Bemba, but share other cultural characteristics with their neighbors to the north, the Luba. Funds for the study were derived from a U.S. Public Health Service Training Grant, a Wenner-Gren Grant-in-aid, and a Social Science Research Council Foreign Area Fellowship. Opinions expressed in the paper are those of the author.
2. Words enclosed in single quotes are English glosses of Swahili terms. In the village of Mpala, as well as in a substantial area surrounding it, Swahili has become the primary language, having been introduced nearly a century ago by Kingwana traders and European explorers. Though it is understood by the majority of the adult population, KiTabwa is not spoken by any but the most elderly or those born in the interior. Children born since independence speak and understand only Swahili. The culture described here appears to be a modification of the traditional system, changed and individualized by a coherent process of transformation into one better suited to the demands of present-day life.
3. The shore around Mpala is both rocky and steep. This effectively prevents the growth of the grasses eaten by the snails which are the intermediate hosts of the blood flukes that cause bilharziasis. As a result, the only cases of the disease found in the area are those contracted elsewhere.
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III(c) INDIVIDUAL INTERPRETATION AND DECISION-MAKING

ALTERNATIVE THERAPEUTIC SYSTEMS IN BELIZE: A SEMIOTIC FRAMEWORK

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Abstract—The first part of this paper presents data on the socio-medical system of an ethnically heterogeneous society collected during 16 months of fieldwork. Special attention is given to the Black Caribs (or Garifuna). The focus is on the possible functions of alternative therapeutic systems. The second half of the paper provides a semiotic framework for the analysis of illness episodes. It is concluded that the sign of disorder in this context has no single interpretant. Rather, there exist a variety of interpretants from which the therapist and patient may select. There are constraints on this process, but the process is enhanced where the patient (and the social group) are free to negotiate a 'diagnosis'. Negotiation implies selecting from among a variety of potential meanings; it implies a dialogue in which one goal is an interpretation which is acceptable in cultural terms and which leads to a therapy which is perceived as 'appropriate'. Negotiation may also mean the realignment of signs into new 'syndromes' which indicate different etiologies or therapies. The existence of alternative therapeutic systems facilitates this process by providing access to new codes governing interpretation. The confrontation with biomedicine and its largely intractable codes may require that the ensuing interpretation incorporate, account for, or partially assimilate the 'diagnosis' or interpretation of biomedical personnel. Nevertheless, a single sign may have multiple referents, each consistent with one of the various interpretations imposed by multiple therapeutic systems. These referents may exist simultaneously without inherent contradiction. But to achieve such a consensus may require the development of new models based on an articulation but not an identification of two or more codes.

INTRODUCTION

Belize (formerly British Honduras) is a small country (some 8800 square miles) with a population of approximately 150,000. It has one of the world's lowest population densities; in addition, out-migration (mostly to the U.S.) has, for the last several years nearly equalled or exceeded immigration plus natural increase despite a birth rate of approximately 40/1000. It remains a British colony free to take its independence at any time. Only Guatemala's claim to Belize, backed by occasional military incursions, keeps the country from becoming fully independent. Belize has total internal autonomy and one of the most stable governments in Central America. The present government has been in power since 1952 and was recently re-elected for another 4 years.

The country is populated by Creoles, Kekchi, Mopan and Yucatec Maya, Black Caribs (Garifuna), Chinese, East Indians, Spanish and Mestizos, Syrians, Lebanese, Europeans and North Americans. All these groups, with the exception of the Syrians and Lebanese, are represented in the Toledo District where data was collected. Punta Gorda, where the author conducted fieldwork for a period of 16 months, is a microcosm of the country as a whole but retains certain distinguishing characteristics. It was formerly a fishing and agricultural village, settled about 1830 or 1840 by Black Caribs. While fishing and agriculture retain some degree of importance, especially in a symbolic sense, the people of the town are now chiefly dependent on wage labor. Punta Gorda is approxi-

mately 60% Black Carib, while each of the other groups form 5–15% of the population. Despite the numerical superiority of the Caribs the town is dominated economically and politically by the Creoles, Spanish, and Chinese.

The earliest inhabitants of Belize were Mayan. Belize, in recent years, has come to be recognized as a center of Mayan activities during the Classic and Post-Classic eras. However, all large ceremonial centers had been abandoned prior to the arrival of the Europeans, as was true for the rest of Central America. Some Maya apparently continued to occupy inland areas, for early British reports note occasional contact with the Maya. The incursions of the English Baymen seeking logwood and mahogany, appear to have driven the remaining Maya out of Belize. In the last 80–90 years, Kekchi and Mopan Maya have migrated in from Guatemala and have established some twenty or so villages in the southern Toledo District. While most of these settlements are no more than 20–30 miles from Punta Gorda, the lack of roads and the difficult terrain, made worse by heavy rainfall during much of the year, make Punta Gorda practically inaccessible for many people in the most distant villages. Many of these settlements have no 'bush doctors' nor anyone knowledgeable in herbal preparations. Individuals purchase some patent medicines from the *cobañeros* (Guatemalan traders) who visit their villages on foot. The Maya now constitute the largest ethnic group in the Toledo District, though a small proportion of the population of Punta Gorda. There are, in fact, two distinct groups of Maya living in Toledo—the Kekchi and the Mopan. Until

recently, the Kekchi and Mopan occupied separate villages and each group tended toward total endogamy. Their languages are mutually unintelligible, reinforcing geographic and cultural boundaries. Various institutions, principally educational and economic, however, have served to bring the two groups together and there are now several mixed Kekchi-Mopan villages.

The Chinese, a small minority within Punta Gorda, first arrived in Belize in the early 1900's. Emigrating directly from China they generally became prominent merchants. Only the most recent generation has taken up other vocations. The original immigrants tended to take Spanish wives, as Chinese women, believed to be susceptible to tuberculosis, were not yet permitted into the country. Several of these 'Chinese' families have gone to considerable trouble to maintain some sense of ethnic distinctiveness, though there is no 'Chinese' community in Punta Gorda. Retention of traditional herbal preparations and therapies has not occurred.

The Spanish/Mestizo population, now believed to be the country's largest ethnic group, has come to Belize from Mexico, Guatemala, and Honduras, often following civil disturbances in those countries. Despite the large influx of Spanish/Mestizos in this century, the country remains distinctively Caribbean or West Indian. The most recent census (1980) allowed persons to specify their ethnic group membership. Persons identifying themselves as Spanish, however, were lumped in the category 'Mestizo', though members of this group vary considerably in physical appearance and cultural characteristics. Many of the 'Spanish' of the north are, most probably, pure Maya who settled the country following the Caste Wars of the Yucatan in the late 1840's.

The Creole population is composed of descendants of the British loggers and their slaves although any descendant of an African-White crossing is generally classified as Creole. It is quite clear, however, that the Creole population now contains many other ethnic elements. In addition, individuals with only European ancestry whose families have been present in the country since at least the last century and individuals with only African ancestry may also be lumped in the category 'Creole'. Locally, a very light skinned person is not referred to as 'white' but as 'clear', a category which avoids some of the complex problems of categorization. The Creoles have been present in the Toledo District since the mid to late 1800's. In general, they were wage laborers, though some quickly became merchants. There seems to be a sense of pride among those elderly Creoles who can identify themselves as having been *chicleros* or forest workers, the men who helped find and cut the finest trees in the days when the mahogany, logwood and rosewood trade dominated the country's economy.

The Black Caribs, or Garifuna as they prefer to be called, are the descendants of escaped or shipwrecked African slaves and the 'Red' Carib Indians (actually Carib and Arawak) of the Lesser Antilles. After one or more forced migrations they migrated voluntarily from Honduras to Belize in the early to mid-1800's. Carib Settlement Day (Nov. 19) officially commemorates their first landing on the soils of Belize in 1832. Punta Gorda was settled some years later. The Gari-

funa also presently occupy coastal settlements in Guatemala, Nicaragua, and Honduras. Their numbers are currently estimated at 65,000 [1]; approximately 1300 live in Punta Gorda.

The sizeable population of East Indians now living in the Toledo District first came to work on the lands of the Toledo Settlement, an American community established in Belize by southerners following the Civil War, in the period from the late 1860's to the 1880's. They arrived from India and from Jamaica where they had previously been brought to work as laborers. There was no further migration of East Indians into the country; while they have tended toward a high degree of endogamy, there is no evidence that any persons have knowledge of any language of the Indian sub-continent and most East Indian traditions, at least the more visible ones, seem to have been lost. Nevertheless, they continue to think of themselves as a distinct community.

North Americans and Europeans together constitute less than 5% of the population of Punta Gorda and the Toledo District, though the roles they fill and their tendency toward entrepreneurship make them more visible and influential than their numbers would suggest. Many have taken up farming, a number arrive yearly during the dry season to cut and ship lumber, a few have attempted to establish businesses (most fail); others have come in as teachers, missionaries, Peace Corps workers, and so on. A few drift into town on their way elsewhere, take up temporary employment, and leave after a few months. The District has seen more than its share of anthropologists; the majority have been American. To the west and south of Punta Gorda are small settlements of Mennonites who have emigrated to Belize from the U.S., Canada and Mexico. A number of Kekchi Indians, apparently attracted by the relative wealth of the Mennonites, have recently become Mennonites. The British Army maintains three camps near Punta Gorda. Every six months the troops are changed, thus introducing several new ethnic components into the area over the years—English, Irish, Scottish and Nepalese Guerks. Their presence in the area is regarded as important, though their interactions with the people of the District and Punta Gorda are limited to certain types of transactions.

While there now appears to have been far more intermarriage or interethnic mating in the past, and certainly at present, than the literature of the past few decades would suggest, Punta Gorda, in theory, provided an ideal location for the study of pluralistic medical systems. Both the social system in general and the medical system in particular are pluralistic (as opposed to plural) in that no one section (ethnic group) or professional sector totally dominates the others. This statement must be qualified by the observation that the State's official medicine is biomedicine and there are sanctions which are aimed at ensuring its dominance. However, those sanctions are not always effective.

It is predicted that in Belize, sectional distinctions will increasingly be made along class lines rather than on the basis of ethnic group membership even though the emerging and changing class structure partially reinforces existing ethnic structures. Nevertheless, there are several institutions which cut across ethnic

boundaries even while allowing for the persistence of such boundaries in certain situations.

While most ethnic sections in Punta Gorda have remained largely endogamous in the last century (with the exception of the intermarrying Creole, Spanish and Chinese populations), it must be recognized that the beliefs and practices related to health and illness introduced into the country with each ethnic section were already highly syncretistic. Mayan practices had been influenced by Spanish medical beliefs and Roman Catholicism. Spanish beliefs, in turn, as introduced into Spanish Central America in the 16th-19th centuries emphasized humoral balance concepts evolving out of early Greek medical thought, modified by Arabic influences. Carib beliefs were a mixture of West African and Carib Indian ideologies. The Creole medical system, evolving first in the bush camps and port cities of Belize, was West African, West Indian, and British. East Indians, cut off from their traditions, were strongly affected by American and British medical theories and practices and whatever mix of beliefs had prevailed in the West Indies at the time of their emigration to Belize. Biomedicine was introduced by the British, modified by continuing international biomedical research and evolving concepts of etiology and therapy, and adjusted to the local cultural, economic, political and ecological situation.

MEDICAL RESOURCES

Unschuld has defined primary medical resources as medical knowledge and skills, drugs and technology and medical equipment and facilities [2]. Taking this broad definition a bit further I also include within the concept of resources the various roles occupied by persons possessing medical knowledge and skills, the ideational system which underlies and, in theory, renders coherent a complex set of beliefs and practices, and the mechanisms for the delivery of care which include the private and public networks which may be utilized during the course of an illness. I have grouped resources available in Punta Gorda into four broad categories. I treat separately the public and private networks which bring people into contact with a resource. Though I have defined the networks as one aspect of a medical resource, networks frequently cut across resource boundaries allowing access to more than one resource simultaneously or sequentially.

Biomedicine

Biomedicine is available both publicly and privately. There is a government run and supported hospital with only limited quantities of the equipment, facilities, and drugs one has come to expect of a hospital in a more industrialized country. Attached to the hospital is an Out-Patient Clinic and pharmacy. There are several programs operated out of the hospital, such as a malaria eradication program and a pre-natal clinic. Medical care provided by the government is largely free, though there are charges for special services. By the standards of any industrialized country the delivery of health and illness care is inadequate. The government salaried physician (there was, until recently, only one; an additional physician is

now located in one of the southern Maya villages) also operates a private clinic where patients are seen and treated for a fee. Some medications normally requiring a prescription in the States can be obtained 'over the counter' at the local town pharmacy or from Guatemala, though variety and quantity are limited. The British Army has at least one physician and several medics in the area at all times. The Belizean government's policy toward delivery of care by army personnel to Belizean citizens seems to fluctuate. At one time the British army had been told not to interfere in the government's attempts to deliver health care. As of this writing the army has been given permission to deliver some medical care in the villages but this is publicized neither by the army nor the government.

The government's policy towards 'bush' medicine (traditional therapies) does not specifically state that the delivery of health care by bush doctors is illegal, rather the law states that medical treatment can only be rendered by a licensed practitioner and, of course, all bush doctors are denied licenses. Nevertheless, bush doctors continue to practice and no person within this District has ever been prosecuted for delivering medical care without a license.

Midwives stand on the sometimes vague border between bush and biomedicine. Legally they are required to obtain a license after completing coursework and hospital and practical training. Most licensed midwives now work in the country's public hospitals. However, the great majority of midwives in the rural areas practice without a license and are allowed to do so, although there are attempts to update and expand their training. The government refers to unlicensed midwives as 'traditional birth attendants'. Midwifery is not restricted to the delivery of babies, but is extended to the pre-natal care of the mother and ante-natal care of mother and child. It is clear that even within Punta Gorda old midwives (unlicensed) are called upon to help with both in the home though the mother gives birth at the local hospital.

Bush medicine

The usual term for all persons who deliver traditional medical care for a fee outside the biomedical system is bush doctor or snake doctor. Snake doctors are generally regarded as specialists in the treatment of snake bites though they do treat other illnesses. Each sizeable ethnic group is represented by one or more bush doctors in the District. Some bush doctors treat a variety of illnesses, usually with herbal treatments or massage, while others specialize in the treatment of only one form of illness. One bush doctor uses a mixture of drugs and therapies: antibiotic injections, vitamins, and so on, obtained from pharmacies in Guatemala, as well as local herb preparations. The term in Carib which is used for the government doctor (*surucia*) is also applied to this man. In English, he is referred to as the 'private' doctor to distinguish him from the government physician and other bush doctors.

General lay knowledge

While some groups are fairly quick to seek biomedical care, others prefer, at least for minor ail-

ments, to utilize bush medicines, 'home remedies' or medicines from the local pharmacy. For minor illnesses, it is most common to seek out the appropriate 'bush' yourself, use what is already available within the home, or ask friends to supply you. This procedure does not involve visiting a local bush doctor, which, in fact, few people do with any frequency. Rather they rely on knowledge passed on from parents, grandparents, other relatives and friends. Such information is hardly esoteric knowledge and may readily be shared with strangers. Some bush doctors willingly show you the plants they use and describe their preparation, while others are reluctant to do so. But the lay knowledge to which I refer here is shared knowledge. In the process of interaction, several ethnic groups seem to have adopted some of the drugs and therapies of other groups so that there now exists a rather large body of shared knowledge which includes information on both bush and patent medicines and what might be referred to as 'home remedies'.

Spiritual healers

This category must remain somewhat narrowly defined for there are spiritual elements in almost every sort of medical treatment; even biomedicine is not devoid of them. I have excluded from this category, for example, the traditional healers whose therapies may combine herbal medicines with 'supernatural' treatments. The *buiai*, whose role will be more fully discussed later, is also excluded and grouped with 'bush doctors' even though his use of herbs may be minimal and the focus on his role as a supernatural medium almost total. This category includes, instead, certain non-traditional or recently established cults. The two examples provided below do not totally exhaust the list of such medical resources but they are the most pervasive and interesting. The 'cult' of Señor Esquipulas, the 'black Jesus' of Guatemala, is the most prominent. The local Catholic priests do not refer to Esquipulas as a saint though several of the inhabitants of Punta Gorda do. The largest and most prominently displayed image in the Catholic church is that of Esquipulas, and the feast day of Esquipulas (Jan. 15) is one of the most important religious holidays of the year. The image was imported from Guatemala and paid for largely through local donations. One local Spanish family who have long upheld the traditions surrounding the cult of Esquipulas brought the statue over and made a sizeable personal contribution. The Feast Day was first celebrated in the church in 1979. Prior to that, all activities had taken place in individual families' homes. Esquipulas is believed to grant certain requests. Some women claim to have been made fertile and both men and women claim miraculous cures through prayers to Esquipulas and/or a pilgrimage to the Basilica of Esquipulas in Guatemala. There are obligations involved in making a request for healing; the individual who recovers must annually fulfill any promise made to Esquipulas and take part in the ceremonies preceding the Feast Day.

There have been several American missionaries who have settled in the area although most stay for a relatively short period of time. Most of these missionaries are Pentecostals or 'charismatics' and Pente-

costalism is spreading rapidly, especially within the Indian villages. The most visible of the local Pentecostal families state that they never use a physician and that their services include a healing service performed when a member of their religious group is ill. Disease, in general, is considered unnatural, the work of Satan. Either Satan or Jesus may heal, but one 'pays the greater price' for the former sort of healing. In their opinion, the healings attributed to Esquipulas are Satanic as is the work of the *buiai*.

PUBLIC AND PRIVATE NETWORKS

By public and private networks, I mean those systems of interconnections which guide persons to one or more medical resources or which lead to a confrontation, voluntary or otherwise, between resident and resource. Some networks are totally public and, in theory, always in operation. Such would include the government's attempts to make health care available through the establishment and publicizing of nationally subsidized programs such as district hospitals and out-patient clinics, pre-natal clinics and inoculation programs for children. Some channels are established by the government and the 'beneficiary's' receipt of health care is not voluntary. It is government law, for example, that all homes must be sprayed with D.D.T. annually in an attempt to eliminate or control malaria-carrying mosquitoes. The ability of an individual to exploit to his own benefit these public networks is based on recognition of their existence, their accessibility and a certain minimal level of knowledge about the intricacies of their functioning.

Private networks are more likely to be temporary and activated only in certain situations. Certainly the cult of Esquipulas involves networks of this sort. Utilization is likely to require more esoteric knowledge. Networks utilized to facilitate other sorts of transactions may be put to use for the purpose of bringing the resource and the potential utilizer together. The production and coordination of the *dogo*, an important Carib ceremony with healing elements, provide a prime example of the private and esoteric networks to which I refer.

BLACK CARIB MEDICAL BELIEFS AND PRACTICES

It is difficult to separate out definitively the West African components of Black Carib culture. Taylor, writing in 1951, stated: "...the tracing of discrete elements to Arawak, Carib, or to this or that African tribal source, appears to be a well-nigh hopeless task at this stage" [3]. The situation has not changed much in the last three decades. The present day Black Caribs, occupying towns and villages along the coasts of Belize, Guatemala, Honduras, and Nicaragua, are descendants of the Red or Island Carib who occupied the Lesser Antilles during the time of Columbus and Africans brought to the New World as slaves in the 16-18th centuries. It has generally been assumed that the African cultural components of Black Carib culture were subordinated to those of the Red Carib and that subsequently the Black Caribs gradually took on more and more of the characteristics of a West Indian

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Creole culture. The Black Caribs of Belize today speak a Carib Indian dialect with loan words from several languages; yet their physical appearance suggests that the Carib Indian genetic contribution is small. This has recently been supported by genetic and anthropometric studies. At the same time, it now appears likely that at one time the Carib Indian genetic component was much greater, but that as the original Black Carib population migrated to various islands and to the coasts of Belize, Guatemala, Honduras, and Nicaragua, they encountered other ethnic-racial groups, principally African and Creole, and interbreeding with these groups over a period of at least two hundred years resulted in the current physical and genetic makeup [1]. That is, genetically the population is far more African than Indian; yet culturally and certainly linguistically, the reverse appears to be true. Taylor believed, however, that in certain respects, African characteristics predominated: "It is in its imponderable aspects that the culture of the Black Carib differs most from that of their Indian forbearers in the Lesser Antilles, so as to constitute, as it were, a Negro cake composed of Amerindian ingredients" [3]. Nevertheless, the similarities between traditional African therapeutic roles and those of the Garifuna are striking, and it seems likely that certain elements of African cultures were readily absorbed by the Island Caribs or maintained by the mixed Carib-African population. Certain etiological concepts suggest the same.

The therapist of any society is a professional and it is the fact that he has gained esoteric knowledge not easily accessible to others that makes him such. Yet the methods whereby such knowledge is obtained may vary. While it is most common in Punta Gorda to refer to all traditional healers as 'bush doctors' regardless of ethnic group or therapeutic role there are in fact considerable differences in ideologies and therapies among the various practitioners. But within no other group does there exist the variation in therapeutic roles found among the Garifuna. These are not so much differences in the types of medicines used as:

- (a) the way in which the therapists have learned their skills;
- (b) the range of illnesses they treat; and
- (c) their function within the community.

The five distinct types which I have thus far found among the Garifuna of Punta Gorda are described below.

First, there is the healer who has learned his medicines. There is the herbalist or bush doctor or midwife who has learned his or her trade, almost always from a close relative. These practitioners have often conducted their own experiments, made their own observations and thereby supplemented their original education. Some have learned the treatment for a single ailment; more often they treat a variety of complaints. Treatment may, but usually does not involve supernatural elements and the practitioner claims no supernatural gifts. These individuals simply prepare the medicines appropriate to the patient's complaint. These preparations are generally sold for a small fee. Some treatments may be considered preventive; in fact, much of the medicine, patent and bush, is consumed in order to prevent an illness. Many Caribs

drink a preparation containing *sorocee* daily because 'it builds the blood'. Thus they make no distinction between 'tonics' obtained at the local pharmacy and *sorocee* obtained in the 'bush'. Both have essentially the same function. By the same token there is no distinction between these and the preparations which are utilized to prevent other persons from harming you or evil spirits from molesting you. These therapists may also know how to prepare such medicines; in addition, they may have much knowledge about *obeah* (sorcery). While these practitioners state that they do not practice *obeah* they may claim the ability to treat the *obeahed* patient and to turn the *obeah* back on the attacker.

Second, there is the healer who has dreamed his medicines. This category included three elderly Carib women. One treated only one type of affliction, the other two treated a variety of disorders, but their principal work had been as midwives. The therapist with whom I was best acquainted treats a number of complaints through massage and with herb and root preparations. She claims no knowledge of *obeah* or its treatment and no supernatural powers, though her brother says she was born with a natural gift to heal. Such a gift may be spiritual in origin. If an illness was one she was not familiar with or if it did not respond to therapy in an expected way, then she would ask the patient to return the following day. During the night she would usually experience a dream in which the correct combination of herbs and roots and the method for their preparation would be revealed. She did not simply 'visualize' the appropriate medicines; rather a 'white' nurse would appear to her, direct her to the correct plants and instruct her in their preparation. Some of her medicines had been learned from other healers.

Third, there is the healer who suffers from the affliction treated. I encountered only one healer of this sort [4], an elderly lady who also has dreamed her medicines. As a young girl she claims to have suffered from an eye disease and she is now partially blind. The only sort of illnesses she treated were those of the eye. This reminds one of the 'cults of affliction' common in parts of Africa, yet there is no evidence for such cults ever having existed among the Carib. This same therapist, incidentally, no longer treats patients. When they too frequently failed to admit improvement she 'asked' that she no longer dream the medicines.

Fourth, there is the gifted healer. The fourth therapeutic role is that of the 'gifted' therapist. He (or she) was born with an ability to diagnose and treat and cannot avoid this obligation even if he desires to do so. For similar reasons, his charges can only be minimal for he is forced by birth to treat. In one sense, this therapist cannot be distinguished from the *buiai*. Both claim the help of spirits in their work and both claim that they were born gifted. Yet the one gifted bush doctor to whom I spoke does not function within the community as a *buiai*. He does, however, treat a variety of afflictions and can diagnose and treat *obeah*. The spirits who guide him appear in several guises. At his birth they appeared as butterflies and still come to his house in that form. But they also appear to him while awake and in dreams as small light-skinned men (non-Carib). They instruct him in the preparation of medicines and aid him in diagnosis. His

beliefs and practices are highly syncretistic and would easily provide the material for an additional paper.

Fifth, there is the *buiai*. This role clearly existed among the Island or Red Carib prior to contact with Africans. It has been documented in mid-17th century reports. And yet, it is uncertain to what degree the role and practices of the *buiai* have been altered by exposure to West African concepts. Borde, writing in 1674, after some slaves had already settled among the Caribs, describes practices of a *buiai* which sound surprisingly African:

The sorcerer (*buiai* or *piaye boye*) then approaches the sick person repeatedly, feels, presses, and manipulates the suffering part, always blowing on it, and extracts sometimes from it, or rather appears to extract, some thorns, or small pieces of cassava, wood, or bones, making the sick person believe that this was the sole cause of the pain. Very often he sucks the painful part and immediately goes out of the house to vomit what he calls the poison [5].

Yet there is no evidence that such practices still exist among *buiais* of the Garifuna today.

It would appear that the true *buiai* achieves his status only after a long and arduous process and that generally, though not always, he must be aided in this process by another *buiai*. He commonly suffers from some illness or a poor state of health in his youth prior to becoming a *buiai*. The *buiai* has several spirits (*hiuruha*) who communicate with him and through him. He is principally a medium and without his *hiuruha* he possesses no special abilities. These *hiuruha* are 'astral' spirits, often the spirits of former *buiais*. There is a main *hiuruha* who takes charge over the others; more than one *buiai* may be aided by the same *hiuruha*. The *buiai* has several functions. He or she is a gifted healer with a special ability to diagnose and treat. In fact, however, it is the *hiuruha* who diagnose and give instructions on the preparation of medicines. Through the *hiuruha* of the *buiai* an individual may speak with his ancestors (*gubida*) and discover what it is they may desire. The *hiuruha* of the *buiai* may have information about past events no longer remembered by those living and they may be able to explain occurrences which otherwise appear inexplicable. Additionally, the *buiai's* presence is critical to the proper functioning of the *dogo*, the Garifuna ceremony referred to earlier. The *dugu* is described by the Garifuna as a 'thanksgiving ceremony' in which ancestors of living participants are honored. In fact, however, the entire rite functions as a healing ceremony. The *dogo* is sponsored by a single family at considerable expense to the members of that family. It may take a full year or more to organize and only two have been held in Punta Gorda in the last few years; I was fortunate to have been present at both. The motivation for the *dogo* occurs when one or more family members fall ill with some sickness which does not respond to ordinary therapy. The doctors may state that they can find no cause for the illness. An ancestor may appear in a dream either prior to the illness episode or following its onset, to one or more family members and indicate that he or she is unhappy and desires that a *dogo* be performed for him. The illness or illnesses of family members are a manifestation of the ancestors' displeasure and cannot be relieved without the *dogo*. Frequently, the ancestor only requires that a special

Catholic Mass be said at a cost of perhaps \$5 BH (\$2.50 U.S.) whereas a full scale *dogo* will cost well over \$1000 BH. The *chugu* is similar in many respects to the *dogo* but undertaken at less expense. Its function is the same as that of the *dogo* and a *buiai* must be present. The ancestor specifies which ceremony he desires. The illness is believed most likely to fall on those whose spirit or shadow is 'light', or those who were favorites of the ancestor while he was alive. During the *dogo*, which lasts approximately three days with almost continuous dancing and drumming, the *buiai*, with the aid of his spirits, transmits the concerns and desires of the ancestors. The *buiai's* function is to bring the ancestors into the *dabuyaba* (feasting house), to transmit their wishes, and, at the end of the ceremony, to send the ancestors out again. It is also his function to rid the *dabuyaba* of any evil spirits, such as *mafia*, prior to the beginning of the rite. The *buiai*, it must be stressed again, is a medium. His *hiuruha* actually conduct the ceremony and the *buiai* may be unaware of the events of the *dogo* since he is, at that point, possessed by the *hiuruha*. It is quite common for other participants of the *dogo* to be possessed during the ceremony by the *gubida* who have come to express their wishes.

CAUSALITY

The Garifuna have a wide range of therapies and therapists from which to choose. They alternatively make use of the pharmacy, the 'bush' and the local hospital. There are perhaps a dozen bush doctors in Punta Gorda; the great majority are Carib. Some are consulted only in cases of 'natural' illness (*lisandi ubau*, or 'sickness of the world'), others may be sought if an 'unnatural' illness is suspected. But it is quite common to utilize more than one resource during the course of an illness and this may require a re-interpretation of symptoms or new concepts of etiology. Many such shifts are made following the process of negotiation which takes place between patient and practitioner or between the patient and his friends and family. Such should be kept in mind as we look at Carib concepts of causation.

It would appear that all illness and misfortune are initially assigned to the category of natural events. In general, Caribs do not believe that God causes illness nor do they seem to believe that illness is punishment for misbehavior. Both these statements, however, must be qualified. Some informants do believe that illness comes from God, though God does not personally cause an affliction. The Garifuna term for natural illness is not 'sickness of God' but 'sickness of the world' (*lisandi ubau*). Other informants stated that God does not cause illness but gives individuals the free will to make decisions which may lead to illness. Individuals are thus responsible, at least in part, for their own misfortunes. For example, an individual may develop a cold because he or she has carelessly exposed himself/herself alternately to the elements of heat and cold. A child may become ill because its mother failed to care for it properly. An individual may suffer a stroke in later years because of a dissolute youth. Some suggested that your own bad actions or bad thoughts will turn back on you. Almost all Garifuna are Catholics, Roman Catholicism having

been introduced during early periods of contact between Garifuna and Europeans, and there may be Catholic elements in this concept of the 'self-inflicted' disease.

Also assigned to the category of *lisandi ubau* are 'seasonal' illnesses (those which occur more commonly during certain months of the year) and 'contagious' illnesses such as measles, mumps or chicken pox. Some Caribs do not recognize the contagious nature of such illnesses, attributing them instead to changes in the weather, wearing dirty clothes, exposure to heat, and so on. In any case, they are regarded as natural. The notion of contagion seems largely to have entered with biomedicine and some recognize the contagious nature of some illnesses while not understanding the mechanism of transmission. It is extremely rare to hear someone speak of germs or bacteria or viruses though the idea that insects may leave 'dirt' in food, rendering it harmful, exists among some. In general, illnesses or deformities present at birth are regarded as natural (they are in fact quite rare). A mother who had two children with club foot attributed the deformity to the position of the child in the womb. Most Caribs believe that stress, 'vexation' and worry can lead to illness because worry and anger 'work on your mind' or 'work on your nerves'. In general, psychoses are attributed to excess worry or strain, although some claim that the condition 'runs in the family' or that the individual 'was born that way'.

The Caribs also recognize the existence of 'unnatural' illnesses. In general, it is the illness which does not respond either to bush or biomedicine which is likely to be regarded as unnatural. Thus no illness, regardless of symptoms, is initially regarded as unnatural. Rather this designation follows a reevaluation of an illness episode by the social group (which may or may not include the victim) or occurs as the result of a series of negotiations between practitioner and patient. The concept of a chronic illness is neither generally understood nor easily accepted, at least not in biomedical terms. Rather it is believed a cure will result from the exploitation of the correct medical resource. There are illnesses for which it is believed the proper medicine has not been discovered but these are regarded as ultimately curable. Thus it is the chronic illness which is most likely to be classified as unnatural; yet the average person with a chronic illness does not regard it as an unnatural sickness if it is one which is common to the community. Diabetes and hypertension, for example, are rarely treated as unnatural illnesses. In addition, if the physician can provide a name for the illness it is less likely to be seen as unnatural. It is rather illnesses which appear in some way unusual, in which the patient suffers greatly and without much relief (relief of symptoms in a chronic illness is often thought of as a cure; the patient then 'catches' the illness again), or in which the symptoms are vague but the illness debilitating, that are likely to be regarded as unnatural.

Unnatural illnesses may be caused by dissatisfied ancestors. I have described the *dogo* which is a specifically Carib rite aimed at alleviating illness by placating the spirits. The failure to provide the ancestor with a *dogo* may lead to the death of one or more persons. Frequently the ancestor (*gubida*) only wishes

recognition and a minor offering will suffice. The spirit's favorite foods and items such as tobacco will be left in a bowl overnight and a Mass will be requested. This is often sufficient to relieve the patient of his symptoms. Some persons attempt to avoid illness by taking precautionary measures. One elderly Carib man always leaves his food untouched for a few minutes and spits or pours out a portion of whatever liquid he is drinking in order that the ancestors may take their share first.

Unnatural illnesses may also be the result of *obeah* (*abiñaraguilai*) or sorcery. The concept of a witch, someone who causes misfortune or illness without his or her knowledge or intent does not seem to exist. Sorcery is always the result of someone's evil intentions and it requires special knowledge and certain paraphernalia. Several persons mentioned to me the use of candles of different colors (red, white, and black), the use of the image of *San Antonio del Fuego* and prayers offered to the same 'saint', although almost everyone denies the practice of *obeah*. The *obeahed* person will suffer, as does the person afflicted by an ancestor from an illness which does not respond to conventional treatment. Only certain bush doctors can diagnose and treat *obeah*. All *buiais* can diagnose and treat *obeah* though certain ones are believed to have *hiuruha* who are exceptionally good at this. *Obeah* is usually treated by bathing the patient in a special preparation of herbs for a certain number of days. The preparation of medicines used in natural illnesses often includes elements from non-Carib sources. Catholic prayers and holy water obtained from the Catholic church are commonly used although most persons preparing bush medicines for their own use do not utilize these. The *buiai* or bush doctor who is capable of treating *obeah* may turn it back on the sorcerer if the patient desires. The death of some persons may thus be attributed by the social group (but not the immediate family) to *obeah* redirected to the sorcerer. Such *post facto* analyses, however, seem rare.

It would appear that unnatural illnesses may have their origins elsewhere too. For example, the Devil can cause illnesses but seems rather to be used as a passive force by persons attempting sorcery. Dirt taken from a graveyard may be thrown into someone's yard and quarreling among the occupants of the house or illness may result but this is due to a human agent using the Devil as an instrument. It is not entirely clear whether this 'devil' is the *mafia* of the Carib or the Devil of the Roman Catholic church or whether the two have become one and the same. Certainly the idea of an evil spirit (one among many) known as *mafia* existed prior to exposure to Roman Catholicism and *mafia* is regarded as quite capable of initiating evil actions on his own. The one 'gifted' bush doctor living in Punta Gorda stated that the words of others (*idahadu*) might be directed against you and could cause illness or misfortune. It is not necessary that the victim hear such words; they are carried in the wind. These words may cause worry which leads to illness or even insanity. This may represent one of those older beliefs which seem largely lost to or ignored by the younger generation. There are other spirits who are capable of causing illness, misfortune and even death and they may act quite

capriciously. Garifuna believe, for example, that evil spirits of one sort or another may 'trouble your sleep'. Caribs who are familiar with ancestor inflicted illness and *obeah* may be only vaguely aware of these many other spirits. Rather, these sources of misfortune exist in theory; they provide potential etiologies which seem rarely to be invoked nowadays.

PLURALISTIC SYSTEMS: THEIR MAINTENANCE AND EFFECTS

The effects of the emergence and maintenance of a pluralistic system in Belize are several. As intersectional transactions increase there has been increasing motivation for the articulation of the codes governing concepts of causation and therapy. No one traditional medical system remains intact, each has been influenced by exposure to the others; yet a single, syncretistic system has not, and likely will not emerge. There are considerable advantages to the continuation of several systems of causality and therapy; for example, from the patient's point of view, the potential for negotiation, for a re-evaluation of symptoms and their meanings, or for a re-alignment of symptoms into different syndromes increases the likelihood of exploiting a resource which will be perceived as effective in the treatment of his illness. This means, in turn, that the patient and his family gain increasing control over the course of therapy. Some patients avoid being drawn into the biomedical system because they feel they lose much control over their options at that point, especially if hospitalization occurs.

The existence of several systems or sections allows for the maintenance of esoteric specialities, even while code-switching and the articulation of codes allows for increasing communication among ethnic groups forced into transactions of a political, social, and economic nature. A Belizean identity is emerging which may eventually supersede identity along ethnic lines, and yet the maintenance of ethnic specific roles, such as that of the *buiai*, allows for the retention of psychologically important ethnic distinctions. Participation in the *dogo* and the *chugu* are distinctive ethnic markers not likely to be done away with in the near future. I predict, in time, the emergence of two parallel systems with the possible retention of ethnic markers at a highly symbolic level. The one system will be an extremely syncretistic system maintained largely at the lay level but with the retention of certain ethnic specific professional roles. The second, biomedicine, will remain distinct with increasing fragmentation among its various sectors as the 'competition for scarce resources' increases.

There are a variety of reasons for the existence of pluralistic systems. In some cases, for what are usually political reasons, they have been legally sanctioned, as is the case in China, India, and to some extent, the United States. In other cases, traditional therapies offer psychological benefits not rivaled by biomedicine's contributions. The preservation of traditional systems reinforces ethnic distinctiveness in situations where the maintenance of certain ethnic boundaries remains important, and, of course, traditional medical systems may offer therapies which are as fully or more effective than those of biomedicine. Additionally, the

concepts of etiology inherent in the traditional medical system may be more consistent with certain values held by the social group and important to their continued functioning. Finally, the existence of several alternative systems allows the patient and his family a wide range of options in seeking a therapy consistent with his perceptions of his bodily state and his personal needs. Belize is a developing nation which has considerable resources to exploit (especially land) but lacks the capital and population to do so. There has never been a time when survival in this country was a simple matter. This has been especially true for those two groups which fall at the bottom of the socioeconomic structure—the Maya and the Caribs. Each has evolved its own distinct way of coping and exploiting its environment. The technique of the Maya has been to rather rigidly standardize behavioral patterns, social structures, and subsistence techniques, though all of this is now changing. The approach of the Caribs has been the reverse and considerable research has now been done on the flexibility and adaptability of the Carib social and economic structures. In a society which has historically maintained several options in terms of occupation, household composition, and distribution of resources [3, 6], the options provided by multiple therapeutic roles and alternative curing systems parallel options maintained in other spheres. The maintenance of several alternative systems of illness causality and therapy is but one further example of the efficient exploitation of a limited set of resources.

In all social systems the conceptualization of the disease process or of bodily functions is linked to a variety of natural and supernatural phenomena. There is a cultural code which links etiology and therapy to social, moral, religious and political systems. This interrelationship of systems is an *a priori* assumption within anthropology and it is the tendency or drive toward consistency that leads us to speak of medical 'systems'. But occasionally I am inclined to believe too much emphasis has been placed on this systemic aspect, that the entire 'system' has been granted a somewhat greater coherency than would seem justified by the data. In MacCannell's words:

... pressure to get to the heart of culture has introduced into the field of anthropology a systematic bias which carries it even further away from its subject: namely, a bias which favors conservative, particularistic versions of culture, which denies the creative activities that occur on the fringes of all cultures. Referring to our own cultural achievements, we call these activities the *avant garde* or the 'cutting edge'. Referring to others we speak of inauthenticity, disorganization, co-optation, absorption, and ruin [7].

While we might easily grant that changes occur on the 'edges' of a social or socio-medical system, we have exhibited a strong tendency to ignore the alternative interpretations at the very center of the 'system'. That is, within most social systems, careful examination shows that illnesses are subject to re-interpretation, symptoms may be regrouped, etiologies expanded or 'shifted' [8] and so on. The assignment of illness category and determination of appropriate treatment becomes increasingly a process of negotiation among 'patient', family and friends,

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between layman and professional. This is especially likely in a pluralistic system where several options offer themselves. The acquisition of new information may lead to the construction of new models allowing for flexibility in interpretation. The whole process is facilitated if boundary crossing to exploit the medical resources (ideologies, therapies, facilities, personnel) of another sector is allowed or encouraged, as it is in Punta Gorda. In Belize, persons commonly utilized several resources simultaneously or sequentially, thus permitting considerable flexibility in therapeutic actions. To illustrate the complexities of that process I present two case histories I recorded in Punta Gorda.

Case I

Mr Juan Sho, age 34, and two of his brothers moved to the town of Punta Gorda from their native Mayan village. Each was accompanied by his family and each proceeded to set up his own small grocery and dry goods store. The brother who first arrived was able to help the other two with the establishment of their stores. Each of the families experienced numerous illness episodes and business problems. At least two of the brothers, including Mr Sho, consulted an American who had lived in Punta Gorda for several years and who had developed a reputation for accurately reading cards and analyzing dreams. This man, whom I shall refer to as Mr Evans, claims to have studied witchcraft but insists he does not use it in his work. He says his analyses are based on certain skills he has acquired, on the signs produced by the cards themselves, and on common sense. Mr Sho visited Mr Evans some 3 years earlier seeking advice about illness in the family and business troubles. He returned several times during the 3 years which followed and was apparently always satisfied with Mr Evans' counsel. On one occasion a reading of the cards indicated a fraud connected with Mr Sho's business. Shortly after this Mr Sho was cheated out of several hundred dollars. When the man who had committed the crime was caught and detained by the police, Mr Sho returned to ask whether the cards indicated he personally should kill the man. Mr Evans quoted Biblical scripture: "'Vengeance is mine', saith the Lord." Mr Sho later returned complaining of nightmares, continuing thirst, hunger and frequent urination. Mr Evans advised him to see the government doctor immediately. Mr Sho did not go to the doctor directly. Mr Evans heard later that he was using bush medicine for the treatment of his symptoms.

Mr Evans left Belize for a period of several months and during that time Mr Sho became progressively worse. Eventually he visited the government doctor and was told he had diabetes. He was given a prescription for tablets which he had filled. However, he apparently did not understand that the prescription was to be refilled and that he was to continue on the tablets. He began to feel ill again. He finally returned to the doctor and was told to have the prescription refilled. He was again taking the pills and was feeling better when I first visited him. I provided him with the material to test his urine for sugar content and then returned a few days later. He told me he had eaten turkey the day before and it had made him very ill. I asked what else he had eaten and he replied he

had eaten tortillas with the turkey. I gave him a list of foods which he should avoid. In the meantime he had solicited the advice of a Mennonite farmer who had stopped in the store. The Mennonites are known to have their own medical supplies. The man told him that he, Mr Sho, required insulin, but that he had none. Mr Sho and his wife considered a trip to Guatemala to obtain insulin (none was then available in Belize), but they could not leave the store nor did they speak Spanish. A short time later I visited again. Mr Sho had continued to use the test material for urine sugar but his prescription for tablets had run out and he seemed to have no interest in refilling the prescription. Mr Sho was, at that time, using *sorocce*, a local bush medicine, was feeling quite ill and had suffered considerable loss of weight. He was interested now only in a cure for his illness rather than treatment of the symptoms. I stated that there were several ways to treat the illness, but there was, to my knowledge, no cure.

On my next visit I found Mr Sho in considerably better health. He was taking no pills, had resumed all his normal activities, had not returned to the doctor, and had not altered his diet, but had obtained some medicine from a bush doctor in the Maya village of San Miguel. He did not know the name of the medicine and was only able to refer to it as 'bitters' a term used locally to refer to several varieties of herbs and roots. He indicated that he continued to use the test material and that his urine showed only a trace of sugar. He later obtained another form of bitters known as Billy Webb bark from a local woman whom he identified as Carib or Creole, and he had sent a request to his native village for an additional supply. He stated he was feeling quite well but had found that both tortillas and soda biscuits made him ill. He was hoping shortly for a cure and stated that he believed a cure was possible since, according to the government physician, the illness had reached his kidneys and his urine but had not yet reached his blood.

Case II

The second case is that of Mr John Arzu, a Black Carib living in a small three room house with his wife, seven of their ten children, the common law husbands of two of their daughters and four grandchildren by three of their daughters. Mr Arzu is now 65. About 3 years ago he developed a numbness over portions of his body. He reported the symptoms to his wife and various bush preparations were used to bathe him: a combination of ginger, rubbing alcohol and lime; water obtained from boiling garlic leaf and fever grass; and camphor mixed with rum or alcohol. There was some relief from the symptoms and Mr Arzu continued his work. After approximately one month Mr Arzu mentioned his symptoms to his employer who told him he didn't believe in bush medicine and ordered him to see the government physician. The government doctor told him he would hospitalize him 1 week for observation. While he was in the hospital Mr Arzu began to experience numbness again and shortly afterwards he had a stroke. He was kept in the hospital for a period of almost 4 months during which time he had a second stroke and lost his speech entirely. His right side was also paralyzed. The doctor reported to the family that he had had 'the pressure'

for many years and that "the sickness had gone to his brain."

Eventually Mr Arzu returned home. He was on medication and was told to return once a week for a blood pressure check. There had been no improvement since the second stroke. Mr Arzu heard about a private 'doctor' from the States practicing in Stann Creek who said to have a treatment for such conditions. The Arzus left for Stann Creek, a trip of several hours by bus, where Mr Arzu received treatment since the second stroke. Mrs Arzu heard about a private 'doctor' from the States practicing in Stann Creek, a trip of several hours by bus, where Mr Arzu received treatments for one and a half months. The treatment involved the use of a machine with a rod which was passed back and fourth over his body. At the end of 6 weeks this practitioner claimed he was being harassed by the government physician and closed his offices. Mrs Arzu reports there had been some improvement during this period.

The Arzus remained in Stann Creek and next consulted with Sarah, a well-known *buiai*. Mr Arzu, Sarah stated, had an enemy who had disguised himself as a friend. This person had used *obeah* against Mr Arzu. She prescribed daily baths in a special herbal preparation. Mr Arzu lived in her temple or spirit center for 3 months and received treatment each day. At the end of 3 months, Mr Arzu returned home, but the baths were continued for a full year. During this time Mr Arzu was prohibited from using 'doctor' medicine as the two types of medicine. Sarah stated, cannot be used simultaneously. Sarah asked Mrs Arzu if she wished the *obeah* turned back on the person who had used it, but Mrs Arzu replied that she only wished a cure for her husband.

Eventually the Arzus travelled to Belize City where they had heard of another private physician. Mr Arzu was given injections and a prescription for medications and told to return in one month and then again one month later. On the third visit a second physician had temporarily replaced the first. He told the Arzus that the illness 'wouldn't cure' and it would be best for them to accept the situation, return to Punta Gorda, and continue with the treatment as prescribed by the government physician stationed in Punta Gorda. They returned to their home. Mrs Arzu tried various remedies in the hopes her husband's condition would improve. On the advice of neighbors nutmeg was placed under his tongue to restore his speech. She utilized a bush known as Hammond's Leaf to lower his blood pressure. The local Catholic priest visited the family and advised that he be kept around the children as much as possible and that his speech might return if this were done. A form of biters known as Contrebo was tried without results, as were several other preparations which Mrs Arzu no longer remembers.

Mrs Arzu obtained a leaflet which has been sent to a friend by a self-professed healer in New York. He claimed that he could help anyone who would "give him their troubles". Mrs. Arzu sent a letter explaining her husband's condition and \$1 U.S. Several weeks later she received a reply. The man stated if she would send an additional \$20 he would send her the materials necessary to treat Mr Arzu. She sent the \$20, a considerable sum in Punta Gorda, and received

the following:

- (a) a handkerchief which Mr. Arzu alone was to use. It was to be kept separate from all other clothing;
- (b) a cross to be worn around his neck;
- (c) a medal, specially blessed, which was also to be worn around his neck. She was told that the medal "will be God and will help him";
- (d) powder to be prepared with water in a special way and used to bathe him. A certain amount of the preparation was to be thrown in the four corners of the house.

The healer also offered a diagnosis of *obeah*. Mrs Arzu followed all the instructions but saw no improvement. She wrote the man again. He replied that for an additional \$15 he would send more medicine. Mrs Arzu consulted with her husband and it was decided not to send any more money. Mr Arzu still wears the cross and the medal, however.

A lady from La Buga (Livingston, Guatemala) told Mrs Arzu that she should not think of this as an illness caused by man. Mr Arzu's condition was due to the fact that in his twenty's and thirty's he had done much 'drinking and playing', sometimes getting wet then drying out without proper concern for himself. She sent medicine from La Buga to massage him. Next a neighbor told them about a 'private' doctor in town, an East Indian who practices a mixture of bio- and bush medicine and had some training in a hospital pharmacy in Guatemala. They went to his house. He said he could help if he could get the right medicines but they were not available in Belize. He gave her some tablets and a 'prescription' for medication which she had filled in Guatemala. She says Mr Arzu showed some improvement after this treatment, but they do not return because the 'doctor' has been warned by police to stop giving treatment and prescribing medicine. The man, in fact, continues to practice, but Mr Arzu walks with a slow, shuffling gait and the family fear his presence at the doctor's house would be noted by the neighbors.

A doctor from Guatemala once came to the house and checked Mr Arzu at Mrs Arzu's request. He told her he could help. Tablets and injections were obtained from a pharmacy in Guatemala. Mr Arzu was 'nointed' (massaged with herbal preparations or other medications) as prescribed by this same doctor, but no change was noted. Mrs Arzu today still hopes for improvement if not a cure. She has just recently heard that a tonic known as Seven Seas will 'help in veins'. 'His veins', she explains, "are stiff and it will help them to move." In the meantime she massages him with alcohol containing wintergreen and gives him Anacin. She no longer takes him to the hospital for checks since he is unable to walk that distance and there is no transportation available. Mrs Arzu accepts the physician's diagnosis of stroke but also believes that Sarah and the healer in New York are correct in claiming that he is a victim of *obeah*. She can see no other reason for his failure to improve.

THE SEMIOTIC MODEL

The discipline or 'doctrine' of semiotics in general and medical semiotics (semeiology) in particular derives from a concern among the ancient Greeks with

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the translation or interpretation of signs of bodily dysfunction. Modern semiotics then, has its origins in fourth century B.C. Greek medicine although the re-establishment of the historical and philosophical links between semiotics and semeiology (diagnostics) is fairly recent.

Semiotics is the study of sign phenomena. A sign is that which stands for something else; it is an object, idea, event, behavior, sound, emotion or feeling which must be interpreted in order to have meaning. Phenomena whose meanings are intrinsic and self-explanatory are non-signs. These non-signs, however, may also function as signs depending on the context and the interpreter(s). The reverse, then, is also true; signs may have non-sign aspects. It is that aspect which does not have intrinsic meaning, which does require interpretation, which we refer to as the sign. In Peirce's [9] theory of the sign, the sign is defined as triadic; it is constituted of an *object* (the motivating force behind the sign, the 'thing' to which the sign actually refers), the *representamen* (equivalent to Saussure's *signifié* [10] or Morris' *sign vehicle*) [11], the 'object' which represents or signifies, and the *interpretant* which is the response (psychological, behavioral, physiological, and so on) which the presence of the representamen stimulates or provokes. All three, in Peirce's theory, must be present for a sign to exist. Semiosis is an activity, a process, the forging of the triad. Semiotics concerns itself not only with particular signs and their denotations or connotations in specific contexts, but with that *process* termed semiosis. Semiosis emphasizes the constant process of interpretation, the creation of new signs. The interpretant of one sign becomes another sign, composed itself of three parts.

There are several categories of signs, but they all have in common the fact that they refer to something; they have a referent, even though that referent may have no existence other than in the mind of the interpreter. 'Semiosis', stated Laferrier [12], "has two faces; it is both the presence of the sign and the absence of the object."

Semiotics further aims at discovering the codes which govern the production of signs, the transformation of signs, the 'exchange values' assigned signs, and the relationships among signs within a single sign system or multiple sign systems. Signs may be studied as they stand alone or as they come to 'refer' within a specific context. But more frequently signs and sign behavior are recognized to be part of a process. Signs are embedded in other signs, they occur within a sequence of signs, they may have many referents which may be activated singly or simultaneously, they are interpreted differently by different interpreters, they can be exchanged for other signs, they have a history, and they can develop or lose referents. Signs are not static but are constantly subject to interpretation; as such they are part of this continuing process of semiosis. An interpretation is defined as the linking of the representamen, interpretant and object.

Because semioticians aim at the discovery of conscious and unconscious codes, semiotics provides a potential schema for moving from one to the other, or for discovering the analogies between a biological (genetic) and a cultural (behavioral) code, or for speaking, for example, of the transformation of an

economic code (a code governing the production and value of material goods) into a social or ideational code (a code governing the production and value of human relationships). A code is defined here as any rule governing the production and signification of signs or the relations among signs, including their syntactic arrangement, or the transformation of one sort of datum into another. Semiotics additionally seeks metacodes, codes which allow for the transformation or production of other codes. Thus, while semiotics is most commonly defined as the study or science of signs, semioticians are generally more concerned with codes than with individual signs.

What are the advantages of utilizing a semiotic approach in the study of behavioral or other phenomena? First, we believe semiotics provides a unifying framework, one which cuts across the boundaries of many academic domains. It allows for the recognition of the analogies existing among the seemingly divergent fields of art, literature, biology, the social sciences, and so on. The rigor of Peirce's terminology provides a precision in the use of concepts such as sign, symbol, index, and icon, not otherwise found in the literature. Further, semiotics, in its multifaceted manifestations encourages focus on interpretation, on the cultural restraints on this process, on the relationships (metaphoric and metonymic) among signs, and on the phenomena of communication (in the broadest possible sense) and the transfer of information.

Illness is defined as a semiotic act or event. At one level it involves the production of signs which signify the intrasubjective perception, initially at an unconscious level, of changed internal relationships which must come to be regarded at this same unconscious level, as potentially harmful to the organism. An example would be the body's 'awareness' of a quantitative change in the relationship between a pathogen and the host organism. In other words, illness at this level of analysis does not require a label for its existence nor does it require that event called diagnosis. The individual's information processing systems in their reaction to these intrasubjectively perceived changes institute responses which themselves constitute the majority of signs of disorder utilized by the diagnostician [13]. These signs signify a response, an interpretant which is, in turn, a sign of a perceived change; but such signs are produced according to a code which is not devoid of cultural components save, possibly, at a strictly genetic level; the changed or changing relationship was evaluated by internal information processing mechanisms which, I argue, are culturally influenced; and the signs are eventually 'symptomized' or described by a patient according to a culturally mediated code (that is, expressed through language, in terms of existing categories, and according to expectations associated with specific roles) and they are *intersubjectively* evaluated by persons who are themselves 'social constructs'.

When these *intrasubjectively* perceived changes of which I have just spoken reach the conscious level, the afflicted person or those around him become aware of his altered state and at this point one or more persons (the 'patient', the diagnostician, relatives, etc.) become involved in interpreting the signs that signal or may signal a change in status. This too is semiosis. Nevertheless, all potential signs are not

interpreted within any one medical system. As Einstein stated, "it is the theory which decides what we can observe". It would seem the task of the medical anthropologist or sociologist to discover the code which governs the production and interpretation, both by the 'patient' and by the diagnostician, of some signs, but not others.

For example, the patient in Punta Gorda frequently distinguishes between 'external' and 'internal' fevers. The patient, in approaching the physician, may state that he has a fever. The physician, by taking the patient's temperature produces a sign which he interprets as indicating normality or abnormality. The sign produced by the physician may contradict the symptom presented by the patient. But the apparent contradiction and negation of the patient's statement may be the result of conflicting codes governing the production of signs. The model on which the physician's production of signs is predicated only allows for the observation of the 'external' fever thus denying the patient's production and interpretation of a sign which cannot be 'coded' by the physician in a biomedical system.

Once the signs are produced, or existing signs are 'observed' and noted, for them to point to a certain state which is conducive to therapy, they must be individually interpreted, that is linked semantically with a referent or assigned to categories known as diseases or syndromes. This categorization is clearly affected by the diagnostician's 'philosophical bias' whether that philosophy involves the notion that ancestors attempt to make their wishes known by inflicting disease, as is true for the Black Caribs of Belize, or is the logical positivism underlying Western biomedicine. Classification of disease is, then, "the first therapeutic act" [14]. Because diagnosis must normally involve communication, the physician becomes inseparable from the 'system' that he attempts to observe. Moreover, the personal need for observations to coincide with the structured cognitive guidelines which are his cultural and intellectual heritage may interfere with his assessment; the diagnostician must, in Bateson's words, wish things to be as he 'knows' they are. Additionally, the internal events taking place within the patient are not directly accessible to the diagnostician. He must, indeed, mediate them, either through verbal transactions, observations of intersubjective signs (which are not necessarily directly referable to a pathogen or to a changed relationship, but are the body's response to the perception of such), or through the acquisition of those signs which are ultimately interpreted by the diagnostician but initially observed through the diagnostician's technological extensions.

Further, illness is ideational. All societies or cultural systems have 'semeiologies', that is, they take cognizance of the signs which indicate disease or illness and they have 'medical' theories or ideologies which both provide an etiology and allow prognostication. Because all such theories are ultimately logical [14-16] such signs prescribe therapies, that is, they function as signals within a given cultural context, producing desirable and expected action. Signs utilized for evaluation in other societies may be extraneous to the body. Evans-Pritchard's work among the Azande provides us with an excellent example of a

society in which many, if not most, of the signs that refer to illness states are found outside the body. Yet such signs often perceptively integrate biological signs produced by the body with 'social signs' indicating disturbances in the social field. That such systems of logic do not correspond to those of Western or cosmopolitan medicine is inconsequential. All that is required for their existence as medical theories is an internal consistency and a concern with cause-effect relationships.

It can be argued that decision-making as related to therapy or health seeking behaviors involves a series of interpretations and analyses of appropriateness analogous to sentence formation and therefore reducible to a 'grammar'. Clearly the prognosis of the diagnostician is based on the assumption that the signs of an illness appear in a certain syntactic arrangement. The therapist's role is thus to interfere with this sequence where any of the signs which have appeared or are assumed will appear in the future are considered unfavorable to the patient. But I am not speaking now of this syntactic arrangement of 'natural' signs but rather of the interpretation given to the occurrence of signs and the sequence of therapeutic decisions based on these interpretations. That is, I am speaking of cultural signs rather than natural ones though I have argued elsewhere [13] that the biological signs of distress (i.e. natural signs) may be more cultural in origin or expression than generally assumed.

This grammar of therapy seeking begins with a vocabulary (the signs produced by the patient and/or diagnostician), a semantic component (a set of possible interpretations, all interpretations not being possible within any one sociomedical system), and a set of cultural axioms linking interpretation and sign(s). Therapeutic decisions are based on the link established between sign and interpretation or, in Charles Peirce's terminology, the representamen and the interpretant. But there is no simple correlation between interpretation and therapeutic action; nor is there a simple correlation between sign and interpretation.

In fact, our grammar must be contextual, that is, the context in which each sign occurs, the signs which precede it and so on, must be taken into account in predicting both the link between sign and interpretant and between interpretant and course of action (which is, in Peircian semiotics, another interpretant). Our grammar must be sensitive to the social matrix in which all illness and health related decisions are made. It must make allowance for the economic factors which influence both the patient's and therapist's interpretations and therapeutic actions. It must recognize the availability of and the accessibility to any one therapeutic system. It must consider both the benefits and the disadvantages to the patient and his family inherent in his or her assumption of the sick role. It must take into account the social and psychological factors which may force patient and therapist into one interpretation rather than another. And it must include the set of all possible interpretations available within any one therapeutic system as well as the total range of alternative therapeutic systems. In fact, I would argue that any attempt to establish a taxonomy of 'diseases' or to reveal a system of causality does gross injustice to the system if it does not

consider the many possible interpretations available and the factors which influence interpretations. And this, in turn, can only be accomplished by intensive study of numerous cases over an extended period of time. It is obvious that while in theory we can establish such a grammar, pragmatically speaking this complex of intervening factors makes prediction of the final course to be followed most difficult if not impossible except in the broadest terms. Biomedicine's goal has long been to reduce the possibilities for interpretation, that is, to link a single interpretant to a sign or series of signs. In the medical model of illness, signs are always regarded as empirically classifiable given sufficient information and the necessary technology to generate and evaluate that information. Thus medical science aims at the development of ever more sophisticated information gathering techniques. But pluralistic medical systems encourage negotiation and experimentation and biomedicine becomes but one alternative therapy system.

Nevertheless, the illness episode and its concomitant set of interpretations and actions can be read as a 'cultural text', as a series of signs connected in a particular syntactic arrangement, the whole perhaps reducible to a single sign bearing one or more connotations. That is, illness is a social event with social or cultural significance in which many of the concerns of the social system as well as the patient are expressed. Illness episodes become communicative acts. Since the patient is a 'social construct', a being who embodies the rules and concerns of his culture, it is natural to assume that culture 'expresses' itself through his illness. Thus a *post facto* analysis of the illness episode with its syntactic and semantic components becomes a text with embedded cultural meanings.

The signs of illness and illness as a sign are polysemic, overdetermined. That is, they have several referents. Any exposition of a system of causality which imputes one meaning or interpretation to a sign or series of signs likely does an injustice to the data; certainly this is the case in pluralistic medical systems for it would seem that alternative explanations are always available. While it is possible to establish a taxonomy of disease types which reveals important concepts and concerns of the social system under study, an examination of individual cases shows that:

- (a) the taxonomy may be considerably complicated by the recognition of alternative therapeutic systems;
- (b) 'new' illnesses have been incorporated into the taxonomy in a way not fully consistent with the original principles; and
- (c) 'disease' types may be exploited to suit the needs of the patient, social group or therapist and therefore these diseases simply constitute a set of 'possibilities'.

There is no one constant and unchangeable link between representamen and interpretant or between the sign and its denotation or connotation. To state that the link between sign and signification is arbitrary is to assign such signs to the category of symbols, and symbols, as we well know, are highly manipulatable 'objects' which can be turned to a variety of uses.

Interpretation, at one level of analysis, as I have stated, is simply awareness, a bringing into consciousness of the sign. The body constantly produces infor-

mation about or signs of its own failures, but only a certain number of these reach our awareness and are made available to others for further evaluation. Thus, the individual has processed critical information and has become aware of certain signs while ignoring others. The process of making signs available to others for evaluation, the patient's presentation of symptoms is culturally coded, as I suggested earlier, and as has been shown in several studies [17, 18] and this too constitutes interpretation. Once the signs are presented, the interpretation of the diagnostician is determined by a restricted code. This code also governs the further production of signs by the diagnostician. There may occur at any point in this process the event termed negotiation in which new signs are produced, old signs re-evaluated or re-grouped, new interpretations offered and considered. But interpretations are rarely made in a vacuum without an awareness of potential therapies. The therapeutic course is determined by the interpretations assigned signs but interpretations are influenced by knowledge of the course of action implied.

Not only are interpretations made intrasubjectively at both the conscious and unconscious levels, and intersubjectively, but the meanings assigned vary according to the interpreter. There are at least three sets of meanings to be derived from the data aside from those which the researcher assigns to individual signs, or to the cultural text. First, there are the meanings assigned to signs of bodily dysfunction by the patient and his family; these are influenced by social, political, economic, religious and personal factors. For example, a patient's poverty may prevent him from evaluating certain signs as indicators of illness if illness implies an inability to continue work. The patient's sense of identity may be strongly linked to his social roles and any interpretation which implies a permanent change in social role may be rejected. Additionally, the patient's self-identity may be expressed through the illness state. The human body is both vessel of meaning and source of experience, engendering social significance and providing the medium for its expression. Social concerns may be expressed through the body and this may be especially true in societies in which other forms of personal expression are denied or restricted. The body is modified by social experience but at the same time provides a model for the interpretation of other phenomena. It is a channel of communication, an instrument utilized to convey feelings, intents, aesthetic qualities, disturbances in social relations and political statements in a culturally appropriate idiom. Second, the social group may impose its interpretations in two ways:

- (a) it may limit the modes of expression in an illness state or the form of presentation of signs; and
- (b) it may interpret the illness state or signs suggestive of a certain bodily condition according to a restricted code.

That is, if we may assume any society functions to maintain itself under most circumstances, we would expect that the range of possible interpretations of bodily signs would be conducive to the orderly functioning of the larger system. Third, there are, additionally, the therapist's or diagnostician's interpretations. The interpretations of the 'bush doctor' or tra-

ditional therapist are generally least likely to conflict with those of the social group, while in most emerging or developing countries those of biomedical personnel are most likely to conflict with the models of both the patient and the larger social group.

Codes governing indigenous concepts of the body are culturally derived, but in ethnically heterogeneous societies, codes must be changed or articulated for any one group or individual to obtain desired resources under the control of another group. This is as true for medical resources—technologies, skills, knowledge, materials, drugs, facilities, roles, and so on—as for other sorts of resources, and it means that individuals in heterogeneous societies may have to learn several body schemata in order to efficiently participate in and exploit the medical resources of others. What is true of ethnically heterogeneous societies is equally true for patients and their families within a system which insists on the priority of a scientific, allopathic approach to causality and classification. To efficiently participate in the exploitation of resources controlled almost exclusively by those whose understanding of the body always seems intellectually beyond our grasp, individuals are forced to learn the 'correct' codes in order to communicate their concerns and gain control, even in a limited way, over their own cases. But, for a variety of reasons, the codes needed by the patient drawn into the biomedical system in Belize are generally not made available to him. He is unable to gain access to the code used by the physician. There emerge several possibilities in such a situation. There may come into existence an articulation of codes. That is, where common understandings exist these may be exploited by both sides. This articulation of codes is occurring among the various ethnic groups with increasing interethnic transactions. Code switching is also a possibility and more than one biomedical persons has found it most convenient to 'speak in terms understandable to the patient', that is to utilize the patient's code, if known, in explaining the illness or in providing treatment.

In Belize, *efficient* exploiters of the biomedical system had learned to do the reverse—to use the terms and concepts acceptable to the physician even while lacking an understanding of the model from which they are derived. This meant that the symptoms presented to the physician were restricted. By the same token, signs which could not be interpreted in terms acceptable to the physician were often not presented, even though they may have been of great concern to the patient. Efficient exploiters of the biomedical system also tended to use intermediaries or 'brokers' who were assumed to be sympathetic to the patient's cause while able to communicate effectively with biomedical personnel. Where multiple therapy systems exist the possibility for negotiation is enhanced. An alternative range of therapists and therapies is available. Finding a plausible and acceptable explanation for a bodily state is a question of exploiting several networks leading to various therapeutic systems sequentially or simultaneously. The patient and/or his family and friends may consider several alternatives and symptoms may be re-aligned or re-structured in accordance with the most promising or acceptable therapy.

But biomedicine's codes are more intractable, less

open to negotiation. A third communicative strategy exists and it predominates among users of the biomedical system in Punta Gorda. In this third mode of communication, two or more distinct sets of codes are left to stand—those of the physician and those of the patient and the larger social group. Neither set of interpretations is challenged. Neither therapist nor patient finds his code in conflict with that of the other. The patient presents his symptoms. The physician may, but often does not, ask questions. The questions themselves generally shed little light on the patient's condition, as far as the patient is concerned, for he has no understanding of the model on which they were predicated. Quite frequently no part of the patient's body is touched. His temperature and blood pressure have been recorded by nurses or their aides and this may constitute the only physical contact between personnel and patient. A treatment is prescribed, but the patient is rarely advised as to the nature of the treatment and almost never as to the reasons for the treatment. Only infrequently is his condition given a name. He is simply told to have a prescription filled, return for a certain number of days for injections or to present himself to the nurses for admission to the hospital. This strategy allows the physician to make an interpretation which is not communicated in any way to the patient, the family or to the social group. Each is allowed to construct their own interpretations according to their own codes without the possibility of two or more sets of codes coming into conflict. This strategy does not preclude the possibility of negotiation between patient and social group nor between patient and other therapists.

SEMIOTIC ANALYSIS OF THE CASES

The sign, where alternative therapeutic systems are available, has no single interpretant. Rather, there exist a variety of interpretants from which therapist and patient may select. There are constraints on this process, but the process is enhanced where the patient (and the social group) are free to negotiate a 'diagnosis'. Negotiation implies selecting from amongst a variety of potential 'meanings'; it implies a dialogue in which one goal is an interpretation which is acceptable in cultural terms and which leads to a therapy which is perceived as 'appropriate'. Negotiation may also mean the realignment of signs into new 'syndromes' which indicate different etiologies or therapies. The existence of alternative therapeutic systems facilitates this process by providing new codes.

The confrontation with biomedicine and its largely intractable codes may require that the ensuing interpretation incorporate, account for, or partially assimilate the 'diagnosis' or interpretation of biomedical personnel. We have seen in the two cases reported how a single sign may develop multiple referents, each referent consistent with one of the various interpretations imposed by multiple therapeutic systems. Yet these referents may exist simultaneously without inherent contradiction or threat to other models. But to achieve such a consensus may require the development of new models based on an articulation but not an identification of two or more codes.

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In both of the case histories presented we see a continuing process of negotiation, of the re-evaluation of signs and of the activation of a series of networks in seeking therapies and etiologies consistent with the patient's and his family's understanding of his case. Both families began by utilizing resources outside of biomedicine. Both found themselves forced at length into the biomedical system and both cases were 'resolved' by combining elements from various systems with the emphasis on those elements most consistent with the beliefs held by the cultural group to which the patient and his family belong. Mr Sho accepted the diagnosis of the government physician, but responded by returning to bush therapies even while altering his diet slightly in conformity with biomedical theory (and, more importantly, his own experience) and utilizing 'scientific' technologies to test his condition. He interpreted the statements of the physician in such a way that they conformed with his belief that his disease was an intrusive entity rather than a systemic process. The physician's concept of the differentiation and interrelation of certain body parts, in this case his focus on kidneys, urine, and blood, were utilized to reinforce Mr Sho's ideas about the nature of his illness, potentially effective therapies and his prognosis.

The Arzu family also accepted the diagnosis given by three separate physicians. But this diagnosis was not held to be in conflict with a diagnosis of *obeah*. They continued in the search for an effective therapy outside biomedicine. Both families' behaviors are consistent with the belief found among most ethnic groups in Belize that all illnesses are curable. Finding a cure is simply a question of exploiting the correct resource.

There was a lack of concern on Mr Sho's part with the nature or origin of his illness. Rather he was concerned with relief of his symptoms or a 'cure' in order that he might resume his personal and social identity. Mr Arzu's family showed greater concern about etiology but only when a variety of therapies had produced no change in his condition. But they too were concerned that Mr Arzu resume his former set of socially established roles. In Belize it has been extremely difficult to elicit from interviewees their feelings or emotions about an illness state. If asked directly if they were worried about an illness they sometimes (but certainly not always) responded that they were. When asked why they were worried they almost always expressed concern about their social rather than their personal identities—that is they wished to return to the social role behavior expected of them. Usually for the women this meant care of their children and for the men a return to work to support their families. That is, the individual's self-image, his personal concepts about his own identity were closely tied to or identical with his identity as manifested in a series of social roles. To attempt to assume the sick role for one's own advantage for any period of time is a negatively sanctioned behavior. In fact, it is a behavior rarely seen. In a society in which every individual must contribute his share of work for the basic social unit to survive it is expected that individuals will give up the sick role as soon as possible and resume their normal roles. If there is one overriding meaning which predominates in the illness episode,

one sign to which the episode is reducible, it is this one. This explains the patient's repeated failure to ask the physician for a name for his illness. Illness is ideally regarded as a transient event which leaves the patient minimally affected in his ability to resume normal activities. Individuals, for example, do not describe themselves as diabetics, a move which would indicate that the illness had become part of a personal identity, that it had been integrated into a 'self'. Rather they state that they have (or had) diabetes (the name furnished by the physician), or sweet blood. Nor have I ever heard a patient describe himself as an epileptic, an asthmatic, and so on. There is, to my mind, an important distinction between the statement, 'I am ...' and the statement "I suffer from ...".

Finally, I would mention the psychosomatic factors evident in both cases. Mr Sho was in most senses a 'marginal' man. He had left his village in search of a better life and he had taken up residence in a town where few Mayans had ever lived or successfully competed before. Indeed, the Mayans generally believe that the storekeepers and administrators of Punta Gorda exploit and manipulate them. Many Mayans avoid the Mayan owned stores on market days in the belief that the Mayans of Punta Gorda exploit them as badly as do the other merchants. Diabetes may easily be exacerbated by emotional factors and, in turn, there may be some relief from symptoms if stresses are reduced. By turning to bush medicine and re-establishing ties with his own village in the search for therapy, Mr Sho may have made some step toward re-establishing his Mopan Mayan identity and reducing some of the tensions inherent in his current position. His status as a marginal figure could account, in part, for the early onset of a disease in a member of an ethnic group where the illness rarely appears.

Both diabetes and high blood pressure are extremely common among the Black Caribs while other supposedly stress-related illnesses—peptic ulcer and asthma—are not. Even heart disease seems to occur less frequently than would be expected. It seems likely that genetic and dietary factors play a role and yet it is also possible that Mr Arzu's case may be an instance of social tensions manifested in a bodily state.

The signs that come to represent illness are multireferential; they 'stand for' a particular physiological or mental state, but at the same time they indicate or point to a past event, some supposedly causative factor; they imply an etiology. Signs of illness, then, are appraisive or evaluative. Mr Arzu's illness was, in one instance, referred to his behavior in his earlier years. A young Mayan girl's "incurable tropical disease of unknown origin" (the biomedical diagnosis) was said to result from her father's attempt to learn sorcery. The *obeah*, intended for another, was, instead, turned upon the daughter. Since a diagnosis in many societies including our own, is often a moral statement, a judgment about past actions of the individual or those who surround him, the evaluative aspect of signs is of considerable sociological importance. The same sign, however, points to the future. It implies certain expectations as to the future status of the 'victim' as well as to his future state of health or lack of it; this is prognosis, the code which governs

the expected course of events or sequencing of signs. It generally indicates a therapy, or, in other words, is prescriptive; and as biomedical science 'improves' almost all illness states would seem to indicate therapies.

Diagnosis is thus irrevocably linked to a prognosis and an etiology, even though those links have been shown to vary considerably from generation to generation and from culture to culture. These links to the past and to the future are sometimes indexical (automatic, natural), sometimes arbitrary (symbolic), but since signs of illness are polysemous, they may be both at the same time, making the 'illness' sign a potentially powerful and manipulatable tool, leading to therapies which conform the patient to certain medical and social standards, or to actions in which the patient attempts to conform the environment to his perceived needs and wishes.

Note: This article was prepared during the course of fieldwork in Belize, and prior to a full analysis and interpretation of the data. Topics covered in this article are more fully explored in the author's dissertation: "Health and illness in a pluralistic setting: a semiotic approach".

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THE UNSYSTEMATIC ALTERNATIVE: TOWARDS PLURAL HEALTH CARE AMONG THE KIKUYU OF CENTRAL KENYA

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Abstract—The traditional medical care system exists and functions in Kenya along with the modern medical system forming a plural health care system. Although the oldest and the most widespread, the former is the least understood and least accepted in any formal way, by Kenyan authorities. This is mainly due to the fact that the system is fluid and unsystematic, lacking in any form a working code of ethics and conceptualised often along the basis of ethnic cultural beliefs and practices on illness and disease. The approach is by no means static. Included in this approach are ethnic traditions and values, folk knowledge, medical taxonomy, patterns and regulations of health-seeking behaviour, supportive social institutions and structures as well as personnel used in the delivery of restorative and preventive therapy.

INTRODUCTION

In contemporary Kenya, a variety of health care systems exist side by side but function separately to cater for the health needs of the same population. Ranging from modern to traditional, this spectrum of plural medicine is utilized by the therapy-seeking consumers.

This traditional medicine is "the totality of all knowledge and practices whether applicable or not, used in diagnosing, preventing or eliminating a physical, mental or social disequilibrium and which rely exclusively on past experiences and observation handed down from generation to generation, verbally, or in writing" [1].

The traditional medical practitioner or healer in Swahili is known as *mganga* for one and *waganga* for more than one. This refers to any one male or female who practices on full-time or part-time basis any type(s) of preventive and/or curative, rehabilitative and promotive medicine without having a recognized qualification in terms of scientific/modern medicine. Traditional birth attendants are included. This practitioner uses plant, animal and mineral substances as well as other socio-cultural and religious factors. He also utilizes the prevailing knowledge, attitudes and beliefs in the community about physical, mental and social well-being and causes of disease and disability.

Stemming from this are 'specialist practitioners' who cure and prevent disease and illness through prayerful prescription and techniques, such as rituals, offerings and self-denial. There are also surgeons and bone-setters, specialists in reproductive disorders, circumcisors, and psychotherapists (psychiatrists) who treat neuroses, depression and other conditions, mainly of anxiety in origin.

There is also the specialist herbalist whose expertise lies in a broad ornamentaria of plant medicines proved or believed pharmacologically active against infections, parasitic diseases, and sometimes in controlling bleeding. Some herbal medicines are primarily potent or important in ritual and magical therapy. The efficacy of such medicines might not be found in the pharmacological value of plants but rather in the belief system of the community concerned.

Found on the fringes of the traditional and modern health care systems is a thriving business of self-styled and often unscrupulous therapists and healers who exploit the patient's desperate search for therapy. Included in this category are fortune tellers, palmists and astrologers usually functioning in urban centres; 'bush doctors', often a rural phenomenon who sometimes administer medicines and injections (acquired through the black market) to their patients often with tragic consequences [2]. 'Street and bus-depot doctor-boys' [3] hustling antibiotic capsules, similarly acquired, are also a common feature in many Kenyan urban centres. This latter category of therapist is not considered in this study.

While the consumer knows exactly when and where to seek the required health care, it appears that he is faced with a feeling of 'shame and guilt' when he seeks the services of a traditional therapist, such that many do not utilize such services publicly and sometimes he may even deny any knowledge of its very existence. This complex is instilled into the consumer through the attitude of the authority and the rest of Kenyan society in general, towards traditional medicine. This means then that although it is the oldest, most original, the most widespread, and quite often the only accessible form of health care in some parts of the country, traditional health care remains the least understood. It is typically dismissed as simply a 'witchdoctor caricature', unbecoming in the minds of a developing society [4, 5]. This attitude dates back to the penetration of European missionaries to Kenya.

All forms of traditional health care, prophecy, divination, magic, religion and the concept of the supernatural and ancestral forces, were summed up as witchcraft and devilish manifestations. In 1925 the witchcraft ordinance was first passed in Kenya to deal with all the harmful power of witchcraft. The word witchcraft appears to mean the art and craft of the clever workers of magic.

The law states that it is an offence for any person to be in possession of a charm or other item used in the exercise of witchcraft, sorcery or enchantment for the purpose of causing fear, annoyance or injury to

people or property. According to the law, when such a person is convicted the charm or other items of witchcraft are forfeited, destroyed or otherwise dealt with as the magistrate may direct.

The law also states that it is an offence for any person to declare himself as a witchdoctor able to cause fear, annoyance or injury to another in mind, person or property. It is also an offence for any person to pretend to exercise any kind of supernatural power, witchcraft, sorcery or enchantment calculated to cause fear, annoyance or injury. In addition it is an offence for any person professing to have knowledge of witchcraft or the use of charms to advise any other person applying to him on how to bewitch or injure persons, animals or other property, or to supply any person with any item to be a means of witchcraft.

These misconceptions about the socio-cultural significance of traditional health care have lingered in the minds of many educated Kenyans, hence putting them in a dilemma as to where to place the *mganga*. Traditional health care has, however, survived these unrealistic attitudes. The situation may change with time. Kenya's current Development Plan for 1979-1983, for instance, recognizes traditional medicine as a legitimate institution to be used for caring for the health of the people: "Traditional medical health care is an important part of life of the people in the rural area" [6]. This statement implies that traditional health care can be of use only among the rural communities, who have remote accessibility to modern health care. Findings from our urban study reveal that availability and accessibility of modern health care does not influence the user's patterns of utilization of traditional health services.

The statutes do not seem to recognize the work of traditional doctors as yet. There is nothing clear to this effect.

The consumers' behaviour in seeking therapy tends to be widespread. Consecutively or concurrently, the consumer utilizes the services of both modern and traditional health care systems for similar or different illness episodes.

Rather than seeking the cheapest and the easiest accessible health care service, the consumer tries a variety of alternatives.

THE CASE OF SUSAN NJOKI

The case of Susan Njoki is an example used to describe the health consumer's behaviour in seeking health care. Susan Njoki is a Kikuyu female patient and wife of a well-paid civil servant in Nairobi about 28 years old. She was married 3 years ago. Since then she has not managed to conceive. Her husband is getting concerned and she fears he may decide to marry another wife who can give him children. Susan developed a pain in the lower abdominal region in early September 1978. Since then she has sought therapy from 10 different facilities.

(a) By her own report, her husband initially took her to an African Private doctor in Nairobi in October 1978;

(b) During the next 3 months Susan's search for cure of the pain and therapy to assist her to conceive led her to the Aga Khan Private Hospital where she was admitted for 7 days and paid K.Sh. 1750/- including doctor's fees;

(c) Traditional Luo practitioner in Kibera Estate (December 1978-January 1979). She paid K.Shs. 450/-;

(d) An unidentified *mganga* in Majengo in February 1979 where she paid K.Sh. 300/- and three chickens;

(e) In March 1979 she went to the City Council

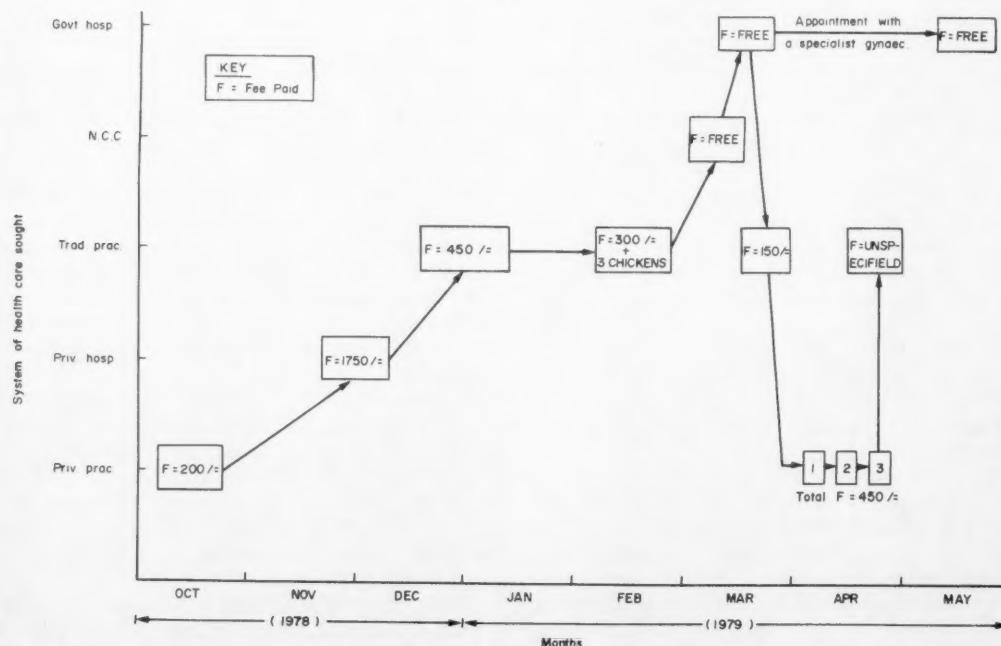


Fig. 1. Therapy seeking behaviour as shown by Susan Njoki.

health centre at Kangemi (free services) and was referred to a specialist gynaecologist at Kenyatta National Hospital (also a free government service);

(f) Instead she went to the outpatient filter clinic at Kenyatta National Hospital and was seen by a clinical officer who gave her pain-relievers and instructed her to book an appointment with the specialist gynaecologist;

(g) She was booked to see the specialist in May 1979;

(h) On her way home she visited a *mganga* at Eastleigh estate in Nairobi. She paid K.Sh. 150/- for two types of herbal prescriptions;

(i) In April 1979 when she visited her sister in Mombasa she consulted two different private doctors and one magician;

(j) Meanwhile she learnt of a *Kamba mganga*. The latter has been treating her for over a week under the writer's observation.

The *mganga's* diagnosis is bewitchment that has affected her reproductive organs—not fatal but causes barrenness if left untreated. This has been caused by a Kamba female who is a working colleague of Susan's husband. This woman wants to snatch Susan's husband. The patient intended to keep her appointment with the specialist at the National hospital and to continue taking the *mganga's* prescriptions. The *mganga* showed no objection to the patient's quest for therapy from different systems and in fact encouraged her to see the hospital specialist as well (see Fig. 1).

PLURAL HEALTH CARE

In this paper I wish to discuss the place of plural health care systems in promoting the delivery of the commodity health. There is no dispute that achievement of complete health is universal top priority. I draw upon the WHO definition whereby adequate health caters not only for medical care but for social and emotional well-being as well.

As it is practised in Kenya and I believe in many other nations of the contemporary world, neither modern scientific medicine, nor traditional medicine has adequately met the community's health needs. The periphery system is, of course, doing more harm than good. As described earlier, this system contains self-styled and often unscrupulous therapists and healers who exploit the patient's desperate search for therapy.

The question is whether, together, these two systems can be articulated to produce the maximum quality of health care to the Kenyan population; a population faced with inadequate financial and manpower resources as far as health care planning and delivery is concerned.

Area of study

This paper is based on selected findings drawn from an urban and rural survey of health care systems in the central region of Kenya. The urban study was based in Nairobi while the rural study is based on the Mbiri location of Murang'a district.

The Mbiri location is situated 80 kilometres north of Nairobi in the hilly forelands of the Aberdares Ranges (3999m) and south of Mount Kenya (5199m)

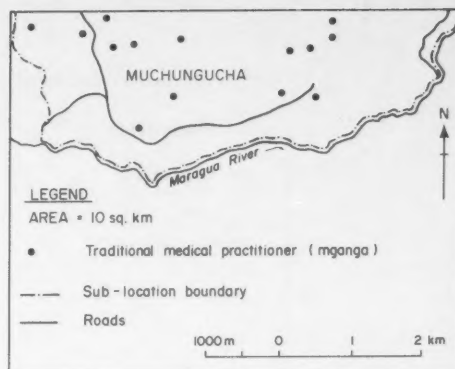


Fig. 2. Distribution of Waganga in a small rural sub-location in Muranga district—Muchungucha.

(Fig. 2). This is one of the 20 administrative locations of Murang'a District in Kenya's Central Province. According to Kikuyu mythology, Murang'a is the original hearth of the people. Mbiri is in the high potential agricultural land of the Kikuyu people. Coffee is the major cash crop, while maize and beans, bananas and potatoes form the food crops. Mbiri has an area of 48 km². The population at the time of the survey (1978–79) was estimated at 17,168 persons living in dispersed homesteads, at an average density of 358 persons per km² [4]. A tarmac road connects Mbiri to Nairobi. Within the villages there are passable roads but public transport is irregular. Murang'a town, which is the administrative and commercial headquarters, is situated about 7 km from Muchungucha sub-location where the indepth survey was conducted.

Rural traditional medicine among the Kikuyu appears to be in the process of decay, while it is thriving in the urban centres such as Nairobi (Fig. 3). Over 90% of the traditional doctors in Mbiri, *Andu Ago* in vernacular, are elderly. They charge very little fee if any to their clients and they accept cash or kind. In contrast, urban traditional practitioners charge exorbitant fees and accept cash only.

One of the conclusions reached so far is that the solution to Kenya health care planning and delivery lies in coordination and cooperation of some selected areas of the modern and traditional health systems. Recognizing that the Kenya Government policy is to provide health services to her entire population by the year 2000, this health care should not only consist of medical care, as has so far been the case. It is felt that the disregard of traditional therapeutic systems, based on various diagnostic and healing strategies, has meant that health status in Kenya has been greatly diminished. Positive qualities of traditional health systems need to be adopted and dangerous ones abolished urgently before too much harm has been done to the consumers.

The question yet to be answered is how traditional health care, fluid and ethnic based as it remains, can be organised at the national level to serve the Kenyan population to the maximum. Further investigation based on pilot projects is required in this area. These should be based both in rural and urban communities. The majority of *waganga* interviewed

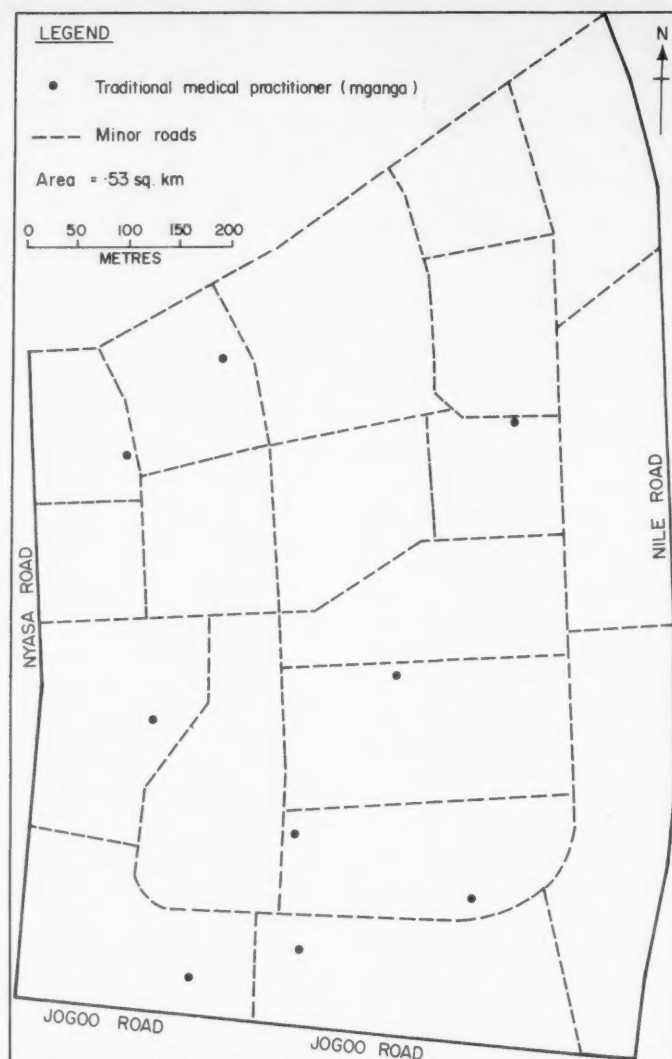


Fig. 3. Distribution of Waganga (TMP) in a small housing estate in Nairobi: Ofafa Maringo.

express deep interest in cooperating with modern medical practitioners. They refer difficult cases to hospitals. This referral system is, however, unsystematic and informal since the *mganga* is unrecognized by his hospital counterparts. There are no existing channels of communication and understandably the patient is reluctant to reveal this to the hospital doctors.

Modern health structure

The modern health structure is composed of:

- (a) Free government health services;
- (b) The church health services;
- (c) The private sector.

All the three health services are faced with shortages of financial and manpower resources as well as the spatial distribution of the services between the rural and urban communities. Urban communities which comprise only about 10% of Kenya's population

are overcrowded with health care facilities. The ratio of *waganga* to the population in one of our urban surveys is 1:847 in contrast to Nigeria's Ibadan study which gives an estimated ratio of 1:532 [3]. A recent Tanzanian study shows 1:400 [7]. The estimated ratio of University-trained medical doctor to population in Kenya is 1:987 for urban areas and 1:70,000 for rural areas [8].

CONCEPT OF DISEASE CAUSALITY

When an individual falls sick, this state of affairs involves himself, his family, colleagues and the community in general. He is expected to adopt the status of sick role whereby he enjoys certain rights and privileges as well as being faced with certain duties and responsibilities—a 'give and take' relationship between himself and the society. The society's expectation of the patient are based upon the codes of cul-

Table 1. Response from a sample of diviners on the Kikuyu concept and classification of diseases

Origin	Examples	Rank	% of Kikuyu diviners N = 25
Natural and god-given (climatic and seasonal changes)	Pneumonia, malaria, coughs, asthma	1	62
Ancestral forces	Infertility, madness	2	52
Negligence of calling	Madness, chronic poverty, calamities	3	50
Evil eye and Sorcery	Instant killers	4	48
Spirits, witchcraft (jealousies)	Madness	5	46
Breach of taboos, Curse	T.B., leprosy, madness	5	46
Dishonest and immoral behaviour	V.D., infertility		
Hereditary (through mother)	Otitis media, syphilis	6	42
Others due to indiv. weakness, no resistance infected food lack of respect to parents, elders	Most contagious diseases (e.g. T.B., asthma, etc.)	7	30

tural beliefs and practices. It is a strong belief that disease does not occur at random. There is always an underlying cause based on the society's socioreligious structures, the supernatural and the natural world, as well as the ancestral world. A complex interrelationship exists between these worlds, which harmonizes the life of an individual and his society. Disease is seen as a rupture of this harmony [1, 2].

Therapy is, therefore, inadequate even after the diagnosis has been established and treatment started. It is essential to identify and then correct or repair the root cause of the disease underlying within the above structures and hence resume the social equilibrium.

The Kikuyu concept of disease and illness causality embody beliefs in:

(a) Natural and god-given illnesses. These include seasonal diseases, accidents, vector-borne and water-borne diseases;

(b) Illnesses whose origin is in the supernatural forces, spirits, ancestors and the consequences of breach of social order (taboos) and religious based obligations;

(c) Illnesses caused by strained social relations, conflicts, tensions and jealousies within the community. These include sorcery, witchcraft and various psychological anxieties.

This concept encompasses both the physical and the metaphysical forces of the universe.

As indicated by Table 1, Kikuyu diviners tend to rank the physical causes (natural or god-given) highest compared to witchcraft, taboos and other cultural beliefs. Ancestral forces rank second. Negligence of calling is ranked third. This refers to disobedience relating to the gods, such as when one is 'called' to perform a special role (e.g. diviner) in the community. If the role is refused, he or she can be punished.

Ranked fourth and tied for fifth are sorcery and witchcraft, which involve interference from others, especially enemies, spirits and sorcerers, etc. Also ranked fifth is social behaviour within the society such as dishonesty, immorality and breach of taboos. In addition, one can be cursed by direct members of one's family (ancestors) for being unkind to them, etc. The last category refers to contagious diseases and is mainly due to individual make-up—lacking resistance to diseases, etc.

The medicinemen interviewed appeared to put responsibility over occurrence of diseases either on the patient or both the patient and his family/close kin. They expressed their strong belief that a majority of illnesses—except those which fall under the category of 'natural and god-given' and a few in the unspecific category, 'others'—have an inclination on breach of social order. The patient or his kin must have fallen into the sin of omission or commission hence getting into conflict with the social environment. It is not that ancestral spirits are malevolent; it is due to the fact that they are the guardians of social order and a deviating individual or social group has to be corrected. For instance, the Kikuyu believe in inconspicuous consumption. A direct translation of one Kikuyu proverb says: 'When you have eaten to your fill, do not show god(s) your big stomach'. Failure to observe such small expectations might, and often does, invite trouble from jealous on-lookers, who may administer witchcraft, sorcery or the power of the evil eye. In case of malice, dishonesty and immorality, the spirits intervene. The power of curse can only affect members of the kin group of the person who administered the curse. Hereditary diseases could be avoided as long as the women remain faithful to their husbands.

An important point to note is that according to

Kikuyu medicinemen interviewed, over 90% of all diseases and illness are community illness and they are preventable. The process of diagnosis involves divination as well as other forms of clinical examinations and history-taking. Many medicinemen interviewed expressed their inability to bring about a cure. They explained that their medicines are impotent without the rituals and prayers offered to god(s). Asked when a cure is actually attained, the practitioners expressed the view that this does not necessarily correspond with the attainment of a physical cure. Some diseases are clinically incurable, in which case there would be nothing like the absence of disease. Other diseases are crippling and/or leave physical scars to the victim. Cure is attained when the patient, within the confines of the sick role status, comes to terms with his situation. That is, he actually comprehends the situation to be less undesirable and it seems to make sense to him culturally and socially. Traditional therapy takes into consideration this process of restoring the patient to this state of social therapy [7].

DIAGNOSTIC PROCEDURES

In any disease or illness condition, the patient's pathological state provides for the starting point in the process of seeking therapy. Diagnosis to identify the cause(s) and prescriptions and administration of medicines follow on. Typically diagnosis is proceeded from a multiple causation model of illness and health [9]. The traditional medical practitioner:

(a) Observes every detail about the patient's movements, ability to perform tasks (as in the cases of insanity);

(b) Performs attitude tests through asking detailed case history questions, both of the patient and his close relation, especially those who may be witnessing the management of therapy;

(c) Enters the next state of divination. In the cause of this he usually gets into a trance whereby he becomes possessed by the 'power'. In this state the practitioner diagnoses and also forecasts the probable cause of the disease as well as prescribing the therapy;

(d) Performs a clinical examination which seems to confirm his diagnosis. This includes physical inspection of the affected areas and other organs such as the tongue, eyes, skin; palpation, examination of blood, urine, stools and discharges.

Divination among the Kikuyu medicinemen is a detailed process whereby every detail has some significance. The medicineman says prayers for the divining gourd (*mwano*). He smears *Ira* on the *mwano* and also on his right ear; at this juncture, he charges the client a little money to 'open' the *mwano*. He utters more prayers for the task before him, then pours the pebbles. He then 'reads' the details of his questions from the pattern formed by the pebbles. The number of pebbles has meaning (see Table 2). As he studies the pebbles, he continues interviewing the client and his relatives. (Usually a client never goes to a diviner alone.)

TREATMENT PROCEDURES

As in diagnosis, treatment is influenced by the con-

Table 2. Random appearance and meaning of divining pebbles from *mwano*

No.	
1	Lonely person (without relatives)
2	A journey associated with ritual
3	Pertaining to a woman
4	Ritual associated with woman
5	Pertaining to a man
6	Stones of the fire-place
7	Pertaining to 'flesh' as to do with death
8	Associated with witchcraft
9	As with 'five above'
10	No information (neutral)
11	As with 'one above'

cept of health and usually extends beyond the sphere of technical and physical medicinal prescriptions. It also plunges into the spiritual and ancestral spheres as well as the social environment.

Herbal remedies are used to treat the physical sphere of the disease. Purgatives and emetics are administered to induce vomiting which is believed to act as a 'clean up' of the inside. Many diseases are believed to be in the abdomen. Some of the 'natural' causes of abdominal disorders are believed to be due to over-eating, constipation, eating infected foods, parasitic infestation and so forth.

Animal fat and ointment from various seeds are extensively used to treat skin problems, open wounds, and even accelerate recovery of fractures and dislocations of joints. Massage is used to treat constipation, fatigues and swollen muscles. A wide thick leaf (*mahuithia*) is warmed on charcoal fire and the hot juices squeezed onto the affected area. A vigorous massage follows. Tremendous improvement was reported after this painful therapeutic procedure.

Steaming of patients who suffer from feverish conditions, malaria, colds and severe headaches is common. A variety of roots and twigs, and the bark of a eucalyptus tree are put into a clay pot. Water is added into the pot and the whole mixture is boiled for a while. Still boiling, the pot is removed from the fire and the patient (half naked) is seated next to the pot and both are covered with a thick blanket. Inhaling the emitting steam, the patient remains in the position until his whole body is covered with beads of sweat. Measles is treated in a similar manner.

Cutaneous incisions are commonly made to treat chronic headaches and dizziness. Such incisions are supposed to let out the 'bad blood' and hence reduce blood pressure in the head.

Surgical operations are performed to treat boils. Apart from circumcision, which is performed by specialist circumcisors, and uvulectomy, very few other operations were observed.

Open cuts are sutured with thorns and the fibres of a *mutundu* bark. The juice of *ndongu* fruit or the sap of *mutundu* is squeezed into the cut to prevent infections and also control bleeding.

The few examples listed above show that Kikuyu approach of disease and illness is not limited to the supernatural and ancestral world. The natural environment, climatic and seasonal changes, water and vectors, general bodily weakness (or lack of resist-

ance) may be causes of illnesses to an individual. A great number of diseases are seen as manifestations of breach of social order. Included in this are many types of depressions, 'madness', inability to conceive, a variety of calamities and so forth. In order to realise complete health for the Kenyan population, a deeper understanding of the community's cultural concept of health is essential. Lack of communication between the two systems of health care has always been a barrier towards tapping every possible health resource to the benefit of all. This holistic approach towards health is the solution to adequate delivery of health care. Neither of the systems is adequate on its own. Both can learn from each other. The traditional medical practice is changing with time in order to cope with social change. This is particularly so in urban areas where the practitioners have been observed to adapt Arabic, Asian and Islamic concepts and practices of diseases and healing. Some Kikuyu urban *waganga* make diagnosis using the Koran, a mirror and also believe in the existence and manifestation of the *jinn*. Extensive use of the chicken for rituals is another urban adaption. Traditionally the Kikuyu use a unicoloured sheep or goat for rituals. It is apparent that some of the adaptations are meant to be misused by unscrupulous money-makers and their clients to instill fear to some member of the community. So far use of hospital medicines by *waganga*, such as antibiotics, capsules, and injections has not been yet uncovered.

Many *waganga* are using scientific terminology to describe illnesses and diseases they treat. These descriptions of symptomatology ascribed to certain diseases such as cancer, kwashiorkor, T.B., asthma and syphilis (to mention only a few) indicate that the condition so labeled is actually something else, and that there is no uniform conception of opinion among the different *waganga*. This may be due to an overlap of symptoms of various diseases and illnesses. An example is kwashiorkor. Generalized body edema among children is interpreted as either kwashiorkor or 'disease of the kidney' [10].

Modern medicine is currently unequipped to handle the increasing mental and sociopathic disorder which are mainly caused by socioeconomic constraints and rapid urbanisation. Chronic conditions such as cancer and degenerative diseases create additional anxieties and frustration, and these in turn encourage the consumer to rely more on the *waganga*.

The traditional system of therapy plays a useful role in such areas. In both urban and rural communities studied, it co-exists with widely accessible modern medical services.

CONCLUSION

For want of a better title, I have used the term 'the unsystematic alternative' to refer to the traditional health care system. This should not be taken to mean that it is chaotic and lacking. This title is appropriate when comparing the two systems. Modern health care could claim to possess a universal set of requirements, ethics, skills and levels of communication.

The traditional system is based on ethnic conceptions of disease and illness. There are no universal requirements pertaining to a practitioner. The major-

ity of *waganga* are illiterate and their medical skills and knowledge varied. Even at the level of a small community (urban), the *waganga* belong to as many as seven different associations. The only requirement closer ethnic code (among Mbiri *waganga*) was prohibition from practising sorcery, of 'doing harm' to the community. To the modern medical practitioner, the above shortcomings of a *waganga* stand out so much that the former feels the latter needs to be 'handled with care'—usually not taking him seriously at all. This makes it difficult to form any channels for either communication or cooperation.

The historical development of many African countries, and Kenya included, has largely determined the systems of health care found in these areas. The penetration of Europeans for instance disregarded African systems of health care. The rural communities were left out in the health care priorities. The elite groups of such countries reside in urban areas where the concentration of health care delivery from both systems exist. This only widens the gap between the quality and quantity of health care distribution found among the rural and urban communities.

Both in urban and rural areas, a large measure of distrust and suspicion does enter into social relationships. Consequently frequent accusation of witchcraft and sorcery result. For many individuals, a visit to the National Hospital or to the other government fee-free dispensaries and health centres is inadequate because:

- (a) Medical doctors do not appear to identify and relate to the patient's complaint and send him away;
- (b) Therapy appears unsuccessful, despite numerous return visits or hospitalization;
- (c) A 'cure' is realised only in medical terms but not in the holistic approach (where the union of the body, mind and spirit is one entity). The hospital doctors fail to establish the socio-cultural environment of disease causality.

All these outcomes increase the chances of the community seeking the services of *waganga*.

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LA STRUCTURE MULTIDIMENSIONNELLE DE GUERISON A KINSHASA, CAPITALE DU ZAIRE

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Abstract—The sick of Kinshasa, capital city of Zaïre, have at their disposal an array of both official hospital and traditional medicine options. However, because of the rapid post-independence population influx to the city, increasing the population from 400,000 to over 2 million inhabitants since 1960, and only a 50% increase in hospital and biomedical facilities in that time, as well as the continued preference for some African treatments, these latter remain an important health care resource in the city. Nearly half of the city's population is from the immediate Lower Zaïre area, thus the Kongo medical system is the prevalent overall medical culture in terms of recourse to treatment. The Kongo medical culture is multidimensional in its range of diagnoses, preventions, or elimination of disequilibriums of a physical, mental or social character. Etiological categories are based upon a distinction between normal and abnormal causes. Therapies range from the physiological to the psychological. This Kongo medico-psychotherapeutic culture is carried out by several levels and types of practitioners, including profane herbalists, nurses and doctors with varying degrees of formal training in the use of biochemical drugs (of fluctuating availability because of economic uncertainty), and clairvoyant psychotherapies by a series of practitioners who deal with afflictions caused by ancestors, witchcraft, and other spirits including those of 'medicines'. These clairvoyant practitioners often practice on a one-to-one basis with clients, but there are also group therapeutic rites—e.g. Zebola, Bilumbu, Mpombo, Mizuka—and spiritual healing churches led by Christian prophets. This broad-ranging medical culture in an urban setting reflects the diversity of the society and a wide range of responses to problems.

Résumé—Les malades de Kinshasa, capitale du Zaïre, ont à leur disposition le choix entre la médecine officielle et la médecine traditionnelle. Toutefois, la population ayant augmenté de 400,000 à plus de 2 millions d'habitants depuis 1960, à cause de l'exode vers la ville ayant suivi la déclaration d'indépendance, tandis que les hôpitaux et les facilités biomédicales n'augmentaient en rapport que de 50%, sans compter la préférence encore présente pour certains traitements africains, tout cela fait que la médecine traditionnelle assume encore une part importante des soins médicaux dans la ville. Près de la moitié de la population de la ville vient de la proche région du Bas Zaïre, aussi le système médical Kongo est en vigueur en ce qui concerne les traitements. La médecine Kongo est multidimensionnelle, et comprend le diagnostic, la prévention et la suppression des déséquilibres de caractères physiques, mentaux et sociaux. Les catégories étiologiques sont basées sur la distinction entre causes naturelles et non-naturelles. La thérapeutique va des traitements physiologiques aux traitements psychologiques. Cet art de guérir Kongo médico-psychothérapeutique est exercé par différents types de praticiens à plusieurs niveaux, comprenant des herboristes profanes, des infirmiers et des docteurs aux divers degrés d'instruction formelle quant à l'utilisation de drogues biochimiques (ou à la disponibilité variable à cause des incertitudes économiques), ainsi que toute une série de praticiens qui exercent une psychothérapie clairvoyante traitant les infirmités causées par les ancêtres, la magie noire et autres esprits y compris ceux des médicaments. Ces praticiens extra-lucides pratiquent souvent leur médecine seul à seul avec leurs clients, mais il existe aussi des rites de thérapie de groupe ex. Zebola, Bilumbu, Mpombo, Mizuka, ainsi que des églises de guérison spirituelle dirigées par des prophètes chrétiens. Cette culture médicale étendue, existant dans un milieu urbain, reflète la diversité de la société et des réponses données aux problèmes.

INTRODUCTION

L'objet de cette étude est de décrire le système de guérison à Kinshasa. Car, chaque fois que nous visitons un malade hospitalisé dans un des hôpitaux de Kinshasa, nous constatons que quelque soit le niveau d'instruction, beaucoup de patients zaïrois hospitalisés suivent simultanément des traitements de la médecine officielle et de la médecine traditionnelle. C'est-à-dire que la ville de Kinshasa pratique dans son art de guérir un système médical à plusieurs dimensions.

La médecine traditionnelle ou la médecine psychothérapeutique serait l'ensemble de toutes les connaissances et pratiques explicables ou non pour diagnostiquer, prévenir ou éliminer un déséquilibre physique, mental ou social en s'appuyant exclusivement sur l'expérience vécue et l'observation transmise de

génération en génération, oralement ou par écrit. Elle embrasse l'hydrothérapie, la chirurgie élémentaire, le massage, la psychothérapie, la parapsychologie, la psychiatrie, la médecine préventive (amulettes, talismans, colliers et bracelets), les examens de laboratoire et d'autres disciplines [1].

Nous avons limité notre étude sur le système de la médecine psychothérapeutique des Kongo habitant la ville de Kinshasa. Le travail de terrain s'est déroulé dans la ville de Kinshasa pendant les mois de mai et de juin 1980. Nous avons interviewé les guérisseurs de Kinshasa d'expression Kongo sur l'art de guérir, sur la catégorie des guérisseurs et sur la causalité des maladies. Nous avons prélevé certaines statistiques à l'Inspection Médicale de la ville de Kinshasa et dépouillé les documents sur la médecine traditionnelle publiés dans la presse de Kinshasa et au Centre de la Médecine Traditionnelle de l'Institut de Recherches

Scientifiques (IRS). En résumé, nous avons utilisé la tradition orale et les documents écrits comme nos sources documentaires.

Dans une telle perspective, nous nous sommes d'emblée heurté aux problèmes d'originalité et d'authenticité. C'est pourquoi nous avons essayé de confronter dans la mesure du possible la tradition orale avec les documents écrits. Somme toute, deux méthodes étaient utilisées: ethnographique et interprétative.

Certes, l'ethnie Kongo, qui compose à peu près la moitié de la population de Kinshasa, est une des mieux étudiée de l'Afrique Centrale [2-6]. Ainsi, pour un public formé des hommes et femmes de science que vous êtes, beaucoup de nos observations ressembleront à une répétition sans doute, mais vous serez d'accord avec nous pour reconnaître que la répétition est la mère de la science. Notre contribution à la science est de produire une étude assez détaillée sur l'ethno-médecine des Kongo de Kinshasa. En fait, l'ethno-médecine est une discipline qui étudie les apports de l'ethnologie appliquée, de la culture, de la religion et de la psychologie à la médecine dans tous ses aspects. Dans cette conception, elle assume notamment les aspects cognitifs impliquant la signification de relations du sujet avec son écologie, ses traditions et l'action pathogène de ces relations [1, p. 7]. C'est dans cette optique que nous entendons participer au mouvement intellectuel universel qui essaie de revaloriser la médecine psychothérapeutique, en confrontant ses médicaments avec les rigueurs de l'expérimentation chimique, pharmaco-dynamique et clinique, en standardisant ces médicaments et en comparant leur efficacité, leur intérêt et leur risque thérapeutique à ceux des produits de la chimiothérapie officielle dans un contexte économique éclairé, avant d'envisager une éventuelle exploitation à l'échelle industrielle [7]. Ceci étant, les guérisseurs traditionnels, les premiers responsables de la médecine psychothérapeutique, seront amenés à reconnaître la limite de leurs compétences et seront également sensibilisés à une coopération plus efficace et plus dynamique avec la médecine officielle [1, p. 5].

LA CAUSALITE DES MALADIES

Chez les Kongo, la maladie est toujours la manifestation d'une cause. Ainsi donc, le malade n'est pas considérée, comme une machine biologique dérégulée, voire un simple organe en dysfonctionnement, mais comme un individu avec tout ce que sous-entend d'influences diverses: passé, personnalité, contexte familial, rôle social, environnement culturel, croyances cosmogoniques et religieuses qui, au même titre que l'état physiologique, sont des aspects interdépendants de la santé [7, p. 6]. En d'autres termes, la maladie n'est pas simplement le résultat du dysfonctionnement d'un organe provoqué par une cause matérielle, mais peut être due aussi à une 'force intangible': Dieux, esprits locaux et ancêtres. Ainsi, le traitement doit utiliser non seulement des substances matérielles mais également des ressources empruntées au monde 'cosmique' ou immatériel [1, p. 1].

Sur le plan de causalité, la maladie peut appartenir

à deux catégories suivant qu'elle est perçue comme normale ou anormale. La maladie normale est celle à laquelle correspond une courte convalescence et qui est passagère. Elle ne se répète pas chez un même individu. Elle est ainsi perçue comme organique ou fonctionnelle. La maladie ordinaire finit par guérir: être malade et être guéri sont des processus naturels. Cette maladie interprétée naturelle est causée par Dieu ou tout simplement par la nature [8]. Elle est directement soignée par un thérapeute avec des produits pharmaceutiques provenant en grande partie des plantes, des animaux et des minéraux.

La maladie anormale est toute maladie non-naturelle. Elle ne se guérit pas vite ou se répète très souvent chez un même patient. Elle est l'effet, le témoignage ou le signe d'une tension ou des conflits sociaux parmi les membres de la communauté ou encore d'un déséquilibre rituel entre le monde des ancêtres et celui des vivants-morts. Elle peut être aussi à la base de la transgression soit d'une règle sociale soit d'un interdit par le malade ou par un membre du clan. La maladie anormale peut être le résultat des conflits dans les relations interpersonnelles telles que jalousie et mécontentement. Elle est aussi le résultat d'une relation particulière découverte entre le malade, les esprits locaux et les ancêtres. Elle peut aussi être causée par la transgression d'une alliance magico-rituelle par le malade ou par un membre de famille. Elle peut être comme conséquence d'une initiation du patient à la magie et au fétiche. Elle peut aussi être soit le résultat d'une action de la sorcellerie et de l'envoûtement d'une personne par une autre soit le résultat des motifs internes au monde de la sorcellerie [8-15]. Elle est le résultat d'un manquement de responsabilité sociale envers le clan maternel ou le clan paternel de la part du patient ou de la part d'un membre de famille du malade.

Comme elle englobe toutes les dimensions de l'homme (biologique, psychologique ou spirituelle, sociale et culturelle), elle est soignée avec des produits pharmaceutiques, et des médicaments sacrés contenant une force surnaturelle. Le patient suit à la fois deux traitements (physiothérapeutique et psychothérapeutique), qui se complètent.

Durant le traitement, tous les membres de la communauté sont mobilisés et concernés. Une solution efficace et rapide doit être trouvée en vue de rétablir ou de recréer l'équilibre normal du sujet. Ce traitement essentiellement rituel vise à la purification de la communauté et au retour à l'harmonie garante du bien-être général. Ces pratiques, à la fois religieuses et médicales, sont perçues comme une intervention des forces surnaturelles et ont comme fonction de recréer un ordre harmonieux. Ainsi donc, traiter une maladie n'est pas seulement de rétablir un patient dans son état organicophysique normal, mais aussi recréer l'ordre caractérisé par une harmonie sociale et l'équilibre rituel. Une société harmonieuse, rituellement parlant, est celle dans laquelle il n'y a pas de conflits sociaux, de maladies non naturelles, de désastres naturels, d'épidémies et de morts prématurées. Elle est aussi une société dont les membres ne pratiquent pas l'envoûtement, la sorcellerie, le fétichisme et où il y a de bonnes relations entre le monde ancestral et celui des vivants. Elle jouit d'une abondance de biens matériels. Ce nouvel ordre, qui est le résultat de la

purification rituelle de la communauté et de l'éradication de l'envoûtement et des fétiches néfastes, est le signe de l'âge d'or que chaque sujet attend [9].

LA PLACE DE LA PHYSIOTHERAPIE ET DE LA PSYCHOTHERAPIE DANS LA COSMOLOGIE KONGO

Les Kongo croient que l'univers est composé de deux mondes, visible et invisible, dont le rapport a pour fin le bonheur des communautés. Ces deux mondes sont séparés par une ligne de démarcation, qui est une séparation virtuelle et hypothétique car les deux mondes sont en interaction l'un sur l'autre. La solidarité entre les habitants de ces deux mondes continue au-delà même de la mort. Ainsi donc, les deux mondes vivent dans un rapport dialectique et se trouvent en état interrompu et mutuel.

Les Kongo croient que l'univers est rempli d'éléments ou d'êtres qui ont tous une force active. Il n'est aucun être qui ne possède pas ce dynamisme. Ainsi, il n'y a pas d'être doté d'une force gelée, inactive et néanmoins, dans l'univers, les êtres suivent des patterns définis dans leur comportement. Ils ne sont pas ontologiquement indépendants les uns des autres et ne possèdent pas tous une force identique.

Leurs rapports sont des rapports d'interaction en général et d'interdépendance parmi les éléments d'une même espèce, la quantité et la qualité de cette force varient d'un être à un autre. Chaque être peut augmenter ou peut affaiblir, consciemment, sa propre force active ou celle de la communauté. Un être peut influencer physiquement et métaphysiquement un autre être, quelle que soit la distance qui les sépare. Par conséquent, dans le milieu, l'homme n'est pas seulement responsable de lui-même, mais aussi du reste de la communauté humaine.

Le monde visible est peuplé par les hommes vivants, les animaux, les plantes et les minéraux. Pour agir dans ce monde, l'être humain a besoin du savoir et de la technique. Tout ce bagage du savoir est appelé en Kikongo *mayela ma mwini*. Le monde invisible est habité par des esprits, les ancêtres, les animaux, les plantes et les minéraux. Les ancêtres sont répartis en deux catégories: les bons ancêtres, *bakulu*, et les mauvais ancêtres, *minkuyu*. Les bons ancêtres se trouvent dans des communautés où ils constituent leur vie journalière comme ils l'avaient toujours fait dans le monde visible: ils naissent, se marient et meurent. Ils visitent les vivants dans leurs rêves. Ils bénissent et renforcent la force active des clans. Les mauvais ancêtres n'ont pas de place déterminée. Du fait qu'ils étaient des envoûteurs et des éléments antisociaux pendant leur vie dans le monde visible, ils ne sont pas acceptés dans la communauté des morts. Ils vivent dans l'isolement. Ils hantent les communautés des vivants en leur causant d'ennuis.

Quand les bons ancêtres appartiennent au passé proche, ils sont des *widi*, des défunts. Les *widi* gardent encore leurs traits humains propres. Quand les bons ancêtres appartiennent au passé lointain, ils sont appelés les esprits locaux (*simbi* et *nkita* ou *bakisi*). Ils perdent leurs traits humains et intègrent le corps collectif des esprits; quant aux mauvais ancêtres, quand ils meurent pour la deuxième fois dans le pays des morts, ils deviennent des raisons d'arbres sur les

routes. Ils blessent toute personne marchant pieds nus qui se cogne contre eux. Ils deviennent finalement des mauvais esprits qui peuplent les forêts et les rivières. Il importe de souligner que les esprits locaux et les ancêtres viennent habiter les médicaments en vue de leur donner l'aspect sacré et rituel. Quand ils habitent dans un médicament sacré, ils sont des *bakisi* ou des *nkita*.

Les Kongo croient qu'il y a deux sortes d'hommes vivants: les hommes ordinaires et les hommes supérieurs. Les *bantu ba mpamba* ou les hommes ordinaires sont les hommes sans *mayela ma mpimpa* ou *kindoki*, les connaissances nocturnes et les techniques mystiques. Ils ne possèdent que *mayela ma mwini*. Ils n'ont pas été initiés 'aux sciences de la nuit'. Ils ne peuvent pas influencer le monde invisible.

Les *bantu hazibuka meso* (les hommes aux yeux clairs, mystiques et composés ou les hommes supérieurs) sont des hommes initiés aux 'sciences nocturnes'. Ils ont des techniques des deux mondes. Ils voient les deux mondes et communient au monde nocturne. Les hommes supérieurs qui sont en possession des 'sciences de la nuit' sont des chefs politiques, des prêtres médico-rituels, des *ndoki* (sorciers, féticheurs, et magiciens) et des prophètes-guérisseurs ou visionnaires. Les 'sciences de la nuit', consistant en la *kundu* et en *nkisi*, sont des pouvoirs surnaturels en potentiel, il faudra encore libérer leur puissance et leur attribuer une direction. Ce sont les connaissances et techniques (savoirs ou pouvoirs) que les Kongo emploient pour influencer le monde invisible et influencer la force active chez les vivants. Le *kundu* et le *nkisi* publics ou positifs sont les sciences nocturnes qui sont utilisées pour protéger les communautés, et pour augmenter et renforcer la force active de chaque membre du clan. Chaque leader politique doit nécessairement posséder ou la *kundu* ou le *nkisi* pour intervenir dans le monde des esprits pour l'intérêt de son peuple et pour guérir les maladies. La *kundu* et le *nkisi* privés ou négatifs interviennent quand la 'science nocturne' est utilisée par un individu afin d'envoûter un être humain et d'affaiblir la force active d'une personne en lui causant la maladie ou la mort. Ils sont ici des savoirs et des pouvoirs que l'homme qui les possède utilise soit pour tuer soit pour rendre quelqu'un malade.

La *kundu* et le *nkisi* publics sont les 'sciences de la nuit' que les thérapeutes emploient pour guérir un malade souffrant d'une maladie non naturelle. Un chef politique qui ne possède pas la *kundu dia ngiadila* est en possession d'un grand et puissant *nkisi* qui influence à sa place le monde invisible dans l'intérêt du peuple. La *kundu* et le *nkisi* publics sont enseignés à quelqu'un avec la participation de toute la communauté. L'initiation aux sciences négatives de la nuit est par contre clandestine.

En d'autres termes, la *kundu* et le *nkisi* publics étaient utilisés par le chef politique et le guérisseur, pour guérir la population, pour combattre maladies et désastres naturels, pour contrebalancer la *kundu* et le *nkisi* privés et pour établir un équilibre magico-religieux entre le monde visible et le monde invisible. La *kundu* et le *nkisi* privés étaient utilisés par un individu ou un groupe privé pour causer du tort à un autre individu ou au clan. Ils sont des *mpandu*: magie noire, fétiche et sorcellerie. Ils étaient employés pour

détruire la neutralité rituelle et l'harmonie sociale. Ainsi, la *kundu* et le *nkisi* privés étaient la source des conflits sociaux et du déséquilibre cosmologique. Une société déséquilibrée est caractérisée par des conflits sociaux, la présence des maladies et des morts non-naturelles, des désastres naturels: épidémie, famine, sécheresse, infertilité du sol et infécondité des femmes et rareté de biens matériels. La présence de ces maux à un degré élevé dans une société provoquait une rupture dans l'ensemble de ses structures: sociales, politiques, sanitaires, économiques, culturelles et religieuses. Par suite de cette rupture, la société connaissait une instabilité socio-politique et une malaise composé d'angoisse collective, de stress, de frustration, de contradictions et une profonde détresse.

Aux prises avec cette situation, la société était forcée de lui trouver une solution, sinon elle pouvait se scinder en plusieurs communautés rivales, connaître des guerres intestines ou même se détruire. Ainsi, le chef politique du clan ou du village, avec la participation de toute la population, mobilisait la prêtrise médico-rituelle en vue de recourir aux rites capables de rétablir l'équilibre métaphysique et l'harmonie sociale de la communauté. La prêtrise organise des rites d'éradication de toute force d'envoûtement et institue un rituel de renouvellement. Dans leurs fonctions et techniques, ces rites sont médico-psychothérapeutiques [9, pp. 152-4; 16].

LE SYSTEME MEDICO-PSYCHOTHERAPEUTIQUE KONGO

La médecine psychothérapeutique

Comme nous l'avons déjà mentionné plus haut, la médecine traditionnelle s'effectue à deux niveaux: physiothérapeutique et psychothérapeutique. C'est ainsi que la guérison chez les Kongo est administrée par plusieurs agents: physiothérapeute et psychothérapeute. Un thérapeute est une personne qui est reconnue par la collectivité dans laquelle elle vit comme compétente pour dispenser des soins de santé, grâce à l'emploi de substances végétales, animales et minérales et d'autres méthodes basées sur le fondement socioculturel et religieux aussi bien que sur les connaissances, comportements et croyances liés au bien-être physique, mental et social ainsi qu'à l'étiologie des maladies et invalidité prévalant dans la collectivité [1, p. 4]. En d'autres termes, un thérapeute ou guérisseur est tout tradipraticien qui soigne un malade ou plusieurs malades, soit avec des produits pharmaceutiques, *bilongo*, soit avec des médicaments sacrés et rituels, *minkisi* (pluriel de *nkisi*).

Bilongo sont une substance ou un composé administré à un patient soit dans un but curatif (traitement des maladies infectieuses et parasitaires, etc.), soit dans un but préventif (substance destinée à protéger contre l'empoisonnement ou la morsure de serpent), soit pour influencer une fonction physiologique (plantes destinées à traiter les stérilités, l'impuissance, le diabète et les plantes galactogènes) [17]. Sur le plan de la médecine préventive, les *nkisi* sont sous forme des amulettes, des talismans, des colliers et des bracelets. Les produits pharmaceutiques qui sont des simples substances avec une faible dose sont désignés soit par *minti* (arbres) soit par *makaya* (feuilles). L'expression

nua nti (boire un arbre) ou *nua makaya* (boire des feuilles) se référerait à une solution médicale ou aux médecines. *Nwata nti* ou *zenga lukaya* (injection de produits pharmaceutiques dans le corps) signifiait une solution médicale qui était déposée sous la peau du patient après des incisions. *Bilongo* ou substances composées à forte dose, sont conservées dans *funda* (paquet) dont les contenants sont faits des feuilles d'arbres et des lianes d'arbre. Elles consistent en produits végétaux, animaux et minéraux. En d'autres termes, les *bilongo* sont des substances médicamenteuses qui peuvent être soit simple soit composées et dont la dose varie du faible au fort. Il va sans dire que les produits pharmaceutiques de la médecine officielle sont actuellement appelés *bilongo*, substances composées.

Définis à 'des forces non-humaines', les *nkisi* sont soit des esprits ancestraux soit des esprits locaux capturés par les hommes aux yeux composés "qui les incorporent dans un support matériel pour les mettre à leur service" [18]. Sur le plan médical, les *nkisi* sont des interventions thérapeutiques (pratiques et rites), résultant d'une connaissance de remèdes et d'un rituel (un ensemble de savoir et de techniques) présentées comme moyen d'agir sur les forces responsables de la maladie [19]. Selon leur dosage, les *nkisi* sont arrangés par ordre hiérarchique. Le *matiti* (les herbes) est le *nkisi* le plus simple. L'expression *nuata matiti* (injection de produits pharmaceutiques dans le corps) signifiait une solution de médicament semi-sacré et rituel qui était déposée sous la peau du patient après des incisions. En général, un individu cherche ces produits soit pour augmenter sa force vitale (*ngolo*) soit pour se protéger contre la force néfaste du voisin. L'initiation à ces *matiti* se fait par apprentissage, quoique sacré. Le *matiti* contenant plusieurs substances fortement dosées avec un esprit ancestral ou local sont des *nkisi*.

La physiothérapie ou kimbuki

La physiothérapie Kongo a trois agents qui n'utilisent que les produits pharmaceutiques pour soigner. Le profane ou *mbuki* soigne en général avec un simple produit pharmaceutique (comme *minti* ou *makaya*). Presque tout Kongo authentique est un guérisseur possédant une ou plusieurs formules médicamenteuses. Le spécialiste physiothérapeute ou *nganga buka* soigne avec des substances composées, *bilongo*. Le troisième physiothérapeute, *munganga* ou *dokuta*, médecin pratiquant la bio-médecine. *Munganga*, le médecin de la médecine officielle utilise des produits bio-chimiques qui sont aussi désignés par *bilongo*. En effet, *bilongo* réfèrent aujourd'hui aux comprimés, aux pilules, aux bouteilles de pommade, aux injections et aux produits médicamenteux qui sont dans des hôpitaux et dans des pharmacies.

Le physiothérapeute est un tradipraticien qui n'utilise que les produits pharmaceutiques pour soigner ses malades. Il peut être soit un spécialiste soignant une seule maladie soit un généraliste administrant plusieurs traitements. En d'autres termes, il se spécialise à une seule maladie ou à une série déterminée des malades. Il peut avoir un cabinet ou il peut être sans cabinet. Il est consulté soit par le patient seul soit par le malade accompagné des membres de sa famille.

Le physiothérapeute prescrit des médicaments provenant des plantes, des animaux et des minéraux. Comme des produits pharmaceutiques proviennent en grande partie du domaine végétal, c'est ainsi qu'on tend à l'appeler herboriste. Ses techniques médicales sont comparables à celles des médecins de la médecine officielle. Sur 17 des 24 zones de la ville de Kinshasa, il y a 1337 thérapeutes, parmi eux 400 physiothérapeutes [13].

L'administration des médicaments traditionnels se fait sous différentes formes: tisanes, apozèmes, émulsions, poudres, ligniments, lotions, épithèmes, potions et par des voies appropriées [17].

En d'autres termes, les modalités pharmacologiques de la physiothérapie reposent sur deux principes: l'administration locale qui a soit une portée générale lorsque l'on applique à des incisions faites à des articulations; une poudre dont les effets doivent se faire sentir dans tout le corps; l'administration générale comme un massage ou une fumigation ou une purification par eau [9, p. 156; 10, p. 30; 20].

Ainsi, pour l'usage externe, le physiothérapeute utilise les frictions, la révulsion, l'innhalation et la fumigation; et pour l'usage interne il utilise la voie entérale: par os, anale (lavement), vaginale, orale, auriculaire, la voie dermique (scarification), la voie transmuqueuse dont la muqueuse nasale, oculaire et celle du canal lacrymo-nasal utilisé pour l'administration des produits anti-convulsifs très puissants et toxiques [1, p. 30; 17, p. 3]. Pendant que le psychothérapeute administre la divination et organise les palabres thérapeutiques, le physiothérapeute n'organise ni la divination ni des palabres thérapeutiques.

En effet, il acquiert ses formules médicales soit par apprentissage soit par héritage. Il peut acheter le savoir médical d'un autre tradipraticien. Un ancêtre peut aussi révéler sa connaissance médicale à son descendant par des rêves et des visions [12]. Quelque soit la manière dont on obtient cette science médicale, l'acquéreur ne sacrifie pas magiquement une âme [13].

En d'autres termes, cette catégorie des tradipraticiens peut être décrite en trois traits: les physiothérapeutes ne soignent souvent qu'un nombre limité des malades pour lesquels ils ont des recettes: le diagnostic qu'ils établissent repose souvent sur des signes physiques de la maladie; dès lors le traitement qu'ils donnent vise surtout le corps et la suppression de symptômes de la maladie; ils déclarent souvent ne prendre en considération que la dimension physique de la maladie [11, p. 3; 21].

Traditionnellement, le traitant spécialiste n'exerce pas seulement la profession médicale, mais il avait d'autres activités assurant sa vie quotidienne. Il ne dépendait pas de ses activités médicales comme seule source de revenue. Il s'engageait à d'autres occupations qu'au traitement des patients.

Aujourd'hui, à cause des raisons économiques, du brassage et de la dégénération du système médical officiel, beaucoup de physiothérapeutes qui, au départ étaient spécialistes se transforment en tradipraticiens généralistes, traitant ainsi les maladies normales et anormales. Ils deviennent pour ainsi dire des psychothérapeutes.

La clientèle préfère d'ailleurs fréquenter un guérisseur qui est compétent pour tous les problèmes posés.

Plus de maladies qu'un tradipraticien soigne plus d'argent qu'il gagne et encore plus de réputation qu'il se crée. La transformation du spécialiste au généraliste est ainsi le résultat du brassage que connaissent les Kongo en particulier et les zaïrois en général. Les tradipraticiens ont ainsi la possibilité de s'instruire et d'apprendre de nouvelles choses au contact des guérisseurs venus d'ailleurs [21, p. 33].

La transformation de spécialiste en généraliste a deux conséquences sur l'efficacité de la médecine traditionnelle: la dégénération et l'entrée des charlatans dans l'art de guérir. Les tradipraticiens spécialisés devenus généralistes et charlatans créent de nouvelles formules médicales. Ainsi, il n'est pas rare de voir un tradipraticien prétendant posséder plus de 600 formules médicamenteuses [12]. Souvent ces nouvelles formules médicinales ont des conséquences très graves sur la santé du patient. Elles sont une des sources de 'malpractice' des tradipraticiens. En d'autres termes, cette transformation a pour conséquence l'imprécision du diagnostic, la nosologie manquant de rigueur, l'exploitation abusive des aspects non matériels et la pratique de la sorcellerie et du charlatanisme.

Par ailleurs, pour pallier à la difficulté de s'approvisionner régulièrement, certains tradipraticiens des milieux urbains ont soit créé de petits jardins de plantes médicinales autour de leurs maisons, soit cherché à conserver leurs produits végétaux bruts ou leurs recettes médicinales [20]. Il n'est pas ainsi rare de voir des guérisseurs qui imitent la pharmacopée officielle soit en fabriquant des comprimés avec des produits traditionnels comme les suppositoires soit en conservant des produits dans des flacons.

Il va sans dire qu'en dehors des critères pharmacodynamiques des médicaments traditionnels, le recours à la médecine traditionnelle peut s'expliquer de différentes façons. Docteur Nzita Kitondo nous donne dans le même ordre d'idée quatre raisons importantes: le fait que les soins donnés par les guérisseurs s'inscrivent dans le contexte de la vie quotidienne; le fait que certains maux interprétés comme maladie par la population (par exemple: plusieurs mamans interprètent comme une maladie le fait que la fontanelle ne soit pas encore fermée vers l'âge de 6 mois) ne sont pas soignés à l'hôpital; le style familial de l'accueil chez les guérisseurs; le manque de produits et d'équipements adéquats dans les formations de médecine occidentale [22].

Il importe aussi de souligner que depuis l'indépendance en 1960, l'évolution de la santé publique en République du Zaïre laisse à désirer. A titre d'exemple, le budget alloué à la santé connaît des fluctuations: en 1958, 9,8% du budget congolais était alloué à la santé, tandis qu'en 1970, 5,6% du budget était accordé à la santé. La République dépensait en 1970 10,5 K (soit 21 cents américains) par habitants [23].

La ville de Kinshasa, pour prendre une illustration, a connu depuis 1960 une augmentation de populations d'environ 500% (de 400.000 en 1960 à 2.073.300 en 1979) et une extension géographique considérable (9.965.000 km² en 1970 contre 155.720 km² en 1960). L'infrastructure sanitaire n'a pas évolué dans le même sens: les lits d'hôpitaux ont progressé seulement de 53% [24]. Kinshasa compte outre les formations médicales assurant les services ambulatoires, une

vingtaine de formations médicales disposant des possibilités d'hébergement d'une capacité de 5800 lits en 1970, soit en indice lit/population d'environ 3.1% contre 4% à 5% en 1960. Pour sa population de 2,073,300 habitants, la ville de Kinshasa dispose de 624 médecins, soit un médecin pour 4200 habitants. Kinshasa, comme beaucoup de villes zaïroises, connaît des problèmes de santé avec acuité. Elle confronte les maladies transmissibles. La médecine officielle faisant ainsi défaut, la population n'a pas outre remède que la médecine traditionnelle.

La psychothérapie: Kimona-meso

La psychothérapie est la pratique médicale qui attaque les dimensions physique et psychique de la maladie. Elle ne soigne pas seulement, mais elle administre aussi un diagnostic pour chercher l'étiologie de la maladie. Ainsi, le psychothérapeute administre la divination et les rites de guérison, qui sont suivis par le traitement physiothérapeutique. La psychothérapie est administrée par trois agents ou *mmoni*: le chef-prêtre, le prêtre médico-rituel et le spirito-psychothérapeute. Ces trois agents administrent des techniques curatives qui attaquent les causes et les manifestations de la maladie. Ces techniques réconcilient le malade et les membres de famille soit avec les esprits locaux (*simbi* et *nkita* ou *bakisi*) soit avec les ancêtres (*bakulu* et *minkuyu*).

Traditionnellement, quand la communauté était victime d'un déséquilibre cosmologique, le chef-prêtre (*mfumu mpu*) organisait des rites d'autodafés et de réconciliation soit au carrefour des routes, soit au cimetière soit au sanctuaire ancestral. Le carrefour et le cimetière sont des symboles de séparation de la communauté des vivants-morts et celle des morts-vivants, un lieu de rencontre des habitants des deux communautés. Ainsi le sanctuaire ancestral comme le cimetière et le carrefour des routes, était une source de thérapie sociale.

Accompagné de la population, le chef-prêtre se rendait soit au cimetière soit au carrefour des routes pour former une alliance avec les ancêtres afin d'assurer la fécondité, la guérison, la fertilité, la longévité, la prospérité, la paix, la sécurité et la réconciliation [25].

Actuellement, le carrefour des routes et le sanctuaire ancestral n'ont plus la place qu'ils occupaient autrefois dans le système médical traditionnel, mais le cimetière est encore fréquenté en vue d'y organiser des rites de guérison. Il n'est donc pas rare de voir un cortège des membres de famille d'un centre urbain se rendre au village pour administrer des rites de guérison et de réconciliation avec les autres membres du clan qui vivent au village. Ces rites sont nécessaires pour un traitement global.

Pour neutraliser le pouvoir politique et sacerdotal des chefs-prêtres, les missionnaires et les agents coloniaux belges ont mené depuis 1878 des campagnes de dénigrement et démythification de leur autorité. Ainsi les chefs-prêtres se sont aujourd'hui transformés en prêtres médico-rituels administrant la physiothérapie et la psychothérapie. *Ta mfumu* pour le chef-prêtre et *Mandona* pour la chef-prêtresse se spécialisent actuellement dans les traitements des maladies d'ordre social et psychique, qui sont causées par *nkita*, un esprit local habitant la rivière. Le *nkita* provoque des

gonflements sur le corps y compris les articulations, les fesses et des plaies dans les narines. En outre, il rend les femmes stériles, provoque des accidents de tout genre et rend le corps déformé ou paralytique. Il provoque des jumeaux, des naissances prématurées et aussi d'autres maux: mal aux pieds, lourdeur du corps, sottise et difformité [18, p. 158].

Kinganga-nkisi est la prêtrise dont le rôle principal est d'organiser des rites thérapeutiques en vue d'intervenir dans les efforts pour guérir un malade. Le *nganga* ou le prêtre médico-rituel intervient dans toutes les maladies anormales. Son traitement est davantage orienté vers la recherche de l'assainissement des relations avec les esprits, les ancêtres et les sorciers considérés comme responsables de la maladie à un degré ou à un autre [21, p. 31; 11, p. 3]. Ainsi, le prêtre médico-rituel pratiquant la divination dont le but est la recherche de l'étiologie de la maladie, administre à la fois la physiothérapie, car il ne cherche pas seulement le pourquoi mais aussi le comment de la maladie. Ainsi la psychothérapie comprend également un traitement des symptômes par des produits pharmaceutiques.

La prêtrise médico-rituelle administre la thérapie du groupe. Elle est ainsi donc caractérisée par l'effort fait par un groupe, sous la guidance d'un guérisseur spécialisé, pour mettre fin aux problèmes de nature sociale ou psychologique qui concourent à affaiblir la santé de certains individus dans le groupe [26]. La thérapie du groupe est composée de la thérapie familiale et de la psychothérapie communautaire. La thérapie familiale est administrée par un psychothérapeute spécialisé ou généralisé à une famille ou à un clan dont un membre est malade. Le *nkita* est l'exemple typique.

Les psychothérapies communautaires sont administrées à un groupe de personnes souffrant des maladies se présentant sous forme de troubles psychiques ou psychosomatiques, dont les causes se trouvent être inscrites dans un contexte social ou psychologique [26]. Les rites thérapeutiques sont tels que le *zebola*, *bilumbu*, *mpombo* et *mizuka*. A la guérison, le malade devient lui-même soit psychothérapeute soit membre des associations des guérisseurs et d'anciens malades qui possèdent en commun une liaison avec des esprits particuliers qui les ont choisis comme receptacles et qui demeurent continuellement auprès d'eux à titre de gardiens [21, p. 32].

Le prêtre médico-rituel diffère du physiothérapeute du fait qu'il utilise des médicaments sacrés et rituels d'où l'expression *nganga-nkisi*, psychothérapeute, ayant recours à des incantations et à des rites. En effet, il n'existe pas de *nganga-nkisi* sans *nkisi* ni de *nkisi* sans *nganga* [9, p. 38]. On devient psychothérapeute soit par initiation soit par héritage. Un aîné peut initier un cadet à son médicament sacré et rituel.

Dans cette situation l'initié ne fait aucun sacrifice humain en contrepartie, car son initiateur avait déjà sacrifié une âme pour acquérir ce *nkisi* [13]. Sans la présence d'un esprit dans le *nkisi*, le médicament sacré et rituel est une image morte sans vie et par conséquent sans pouvoir surnaturel. Un ancêtre qui n'a pas transmis sa connaissance médicale à un cadet, la lui transmettra soit par rêve soit par vision [14]. Ici encore, l'héritier ne sacrifie pas d'âme. Le médicament sacré et ritualisé a déjà sa vie magique. Par contre,

tout candidat s'initiant à un médicament sacré et ritualisé sacrifie une âme pour le vitaliser. Si elle échoue de capturer magiquement une personne, en général un parent, il se sacrifie lui-même. Dans cette situation, il meurt ou devient un détraqué [12; 13].

Le prêtre médico-rituel a toujours un cabinet. Il est souvent généraliste, possédant plusieurs formules médicales. Il travaille soit seul soit en groupe. Le patient est en général ambulatoire. Le guérisseur des grands rites thérapeutiques abrite pendant plusieurs semaines les patients dans sa clinique.

En résumé, la prêtrise médico-rituelle jouait quatre rôles principaux: Primo, le prêtre dénoçait et détruisait les pouvoirs d'envoûtement des sorciers, des féticheurs, des magiciens, des ancêtres et des esprits quand ils n'étaient pas contents de la conduite des êtres vivants. Secundo: il guérissait les malades avec des médicaments sacrés et rituels. Tertio, le prêtre médico-rituel était un prophète ou visionnaire ayant la capacité de voir des choses cachées et d'expliquer dans un langage ésotérique la cause de la maladie, de la mort et d'un désastre naturel. Entrant en extase, *mayembo*, il dévoilait les secrets du cœur ou prédisait l'avenir. Quarto, ayant la connaissance mystique et la maîtrise des deux mondes, il conférait l'autorité au chef socio-politique. Le prêtre médico-rituel fondait et renforçait l'autorité [28].

La spiritopsychothérapie: Kingunza

Les Kongo sont en contact avec le catholicisme depuis 1482 quand Diego Cão et l'expédition portugaise ont accosté à l'embouchure du Fleuve Kongo, et avec le protestantisme depuis 1878 quand les premiers missionnaires protestants européens ont fondé leur première église en pays Kongo. Les Kongo sont aujourd'hui parmi les groupes africains les plus marqués par l'Evangile et les plus acculturés. Le syncrétisme religieux et médical a donné naissance à la spiritopsychothérapie moderne, le *kingunza* dont l'agent est *ngunza*, prophète-guérisseur. Le spiritopsychothérapeute est habité par le Saint-Esprit qui lui donne la force et le pouvoir de soulager les différents maux dont souffre l'humanité. La communication avec le Saint-Esprit a lieu directement par invocation ou par élan mystique [21, p. 30].

Le prophète-guérisseur administre la guérison soit au sein d'une église soit indépendamment des églises. Pendant que certains spiritopsychothérapeutes sont des membres des églises établies, par contre d'autres ne sont que des adeptes des groupes thérapeutiques.

Les *ngunza* offrent une thérapie qu'ils lient essentiellement à leur charisme, à leur foi ainsi qu'à celle des fidèles qui espèrent le soulagement de leurs maux [21, p. 30]. La guérison s'obtient par des paroles, des actions et des gestes rituels: bénédiction, imposition des mains et purification [21, p. 30; 29]. L'efficacité des gestes prend source ultime dans l'inspiration du prophète-guérisseur, par l'esprit de Dieu, le Saint-Esprit [20].

Ainsi la spiritopsychothérapie se répartit en deux tendances: conservatrice et progressiste. Les prophètes-guérisseurs conservateurs rejettent toute utilisation soit des médicaments sacrés et rituel soit des produits pharmaceutiques dans leur thérapie. Ils n'utilisent que la parole, l'eau et l'essuie-mains, pour

guérir et pour chasser les mauvais esprits. Ils travaillent en général ou au sein d'une Eglise établie ou au sein d'une association thérapeutique. Certains communautés de l'Eglise Protestante comme la Communauté Evangélique au Zaïre (CEZ), la Communauté du Saint-Esprit en Afrique (CSEA) et l'Eglise de Jésus-Christ sur la Terre par le Prophète Simon Kimbangu (EJCPSK) permettent l'exercice de cette thérapie par les membres qui ont le don de guérir. Ces prophètes-guérisseurs guérissent dans le cadre de l'Eglise et non en dehors d'elle. Ils ne dénoncent pas en général les sorciers qui sont à la base d'une maladie.

Les spiritopsychothérapeutes progressistes, tout en privilégiant le traitement par l'eau, par l'essuie-mains et par la parole laissent également une part au traitement par médicament provenant soit de la pharmacopée traditionnelle soit de la médecine officielle. Ils peuvent aussi pratiquer la divination et par conséquent peuvent dévoiler les facteurs qui ont contribué à l'affaiblissement de la force vitale du patient. Il n'est pas ainsi rare de voir le prophète-guérisseur progressiste recommander au malade de suivre un traitement chez un médecin dans un hôpital. Le patient ambulatoire amène des médicaments chez le guérisseur-spirituel qui les bénit afin de leur attribuer le pouvoir psychothérapeute dont ils manquent. Les guérisseurs et les malades croient que la médecine officielle n'a que l'aspect physiothérapeutique. Ainsi, elle ne guérit que la maladie physique ou normale dans la plupart des cas. Pour les malades hospitalisés, le spiritopsychothérapeute se rend aux heures tardives à l'hôpital pour administrer le traitement qui n'a pas encore été donné jusqu'à maintenant. Un patient hospitalisé peut aussi pendant des heures tardives sortir de l'hôpital pour visiter soit un prêtre médico-rituel complétant le traitement soit un spiritopsychothérapeute. Il n'est pas rare de voir un patient qui suit à la fois un traitement administré par un médecin, un prêtre médicorituel et un spiritopsychothérapeute.

Dans une structure multidimensionnelle de guérison, il y a toujours des va-et-vient entre les cliniques officielles et les cabinets des tradipraticiens. Dans ce même contexte, Docteur Nzita Kitondo spécialiste zaïrois en Santé Publique, nous donne cette réflexion: "... plusieurs malades vus en milieu hospitalier ou dans les dispensaires officiels suivent simultanément des traitements de la médecine officielle et de la médecine traditionnelle; d'autrefois, ils commencent par un traitement de médecine traditionnelle pour terminer par un traitement de médecine officielle ou encore ils commencent par la médecine officielle pour terminer par la médecine traditionnelle. Sur 6000 femmes qui sont venues durant le premier semestre 1975 pour une consultation prénatale au Centre de Médecine Communautaire (CMC) de Ndjili à Kinshasa, plus de 80% suivaient simultanément les traitements de la médecine traditionnelle et de la médecine officielle. L'enquête, qui portait sur le port des colliers, bracelets, ceintures, amulettes et sur la présence des signes d'incision, a révélé les données statistiques suivantes: 20% des femmes portent des bracelets du type *nlunga* comme protection contre les mauvais esprits, et les sorciers; 40-60% portent des ceintures, amulettes ou autres objets de protection pour elles-mêmes ou pour leurs enfants; 70-80% des femmes présentent des cicatrices d'incision, stigmates les plus fidèles du recours à

un traitement antérieur préventif ou curatif de la médecine traditionnelle" [22, p. 38].

CONCLUSION

Comme nous l'avons déjà signalé dans l'introduction, l'objet de cette recherche est de revaloriser la médecine psychothérapeutique Kongo afin d'apporter des preuves objectives sur les concepts médicaux Kongo, sur l'efficacité des techniques thérapeutiques et même sur l'innocuité des recettes médicamenteuses Kongo. La médecine psychothérapeutique est, comme toutes les autres médecines traditionnelles en Afrique, un système médical dont l'efficacité repose sur l'adhésion du malade et du thérapeute à un même cadre socio-culturel et sur l'intervention de l'opinion collective au travers de laquelle ils définissent leurs relations. Ainsi, face au malade, le thérapeute agit sur deux plans étroitement fusionnés, mêlant l'art du médecin-psychiatre à celui du médecin-biologiste; c'est pourquoi, dans son acte thérapeutique, le recours aux soins physiques est doublé des pratiques rituelles destinées à apporter, dans un climat de confiance, apaisement et reconfort [7, p. 7].

Mais comme nous ne sommes pas du moins sur le plan de notre formation académique, du domaine des sciences biomédicales, nous avons ainsi, comme le lecteur l'aurait déjà constaté, orienté notre recherche sur les aspects psychothérapeutiques de la médecine Kongo. Nous avons discuté de la causalité des maladies et de la catégorisation des guérisseurs. Ainsi, nous avons arbitrairement laissé de côté l'analyse des médicaments traditionnels Kongo dont les propriétés physico-chimiques et pharmacologiques reposent sur la tradition orale qui n'est malheureusement pas ni bien définie ni bien codifiée. C'est ici que s'avère la nécessité d'étudier la pharmacopée africaine. Car provenant de la même source que la plupart des médicaments officiels, de nombreuses recettes médicamenteuses traditionnelles renferment des principes actifs qu'il faut découvrir pour en faire bénéficier à une plus large partie de la population. De même certains médicaments traditionnels, par leurs molécules chimiques, peuvent provoquer des effets toxiques et doivent, par conséquent, être détectés et écartés de l'arsenal thérapeutique traditionnel [17, p. 3]. D'ailleurs, le Président Léopold Sédar Senghor du Sénégal aborde ce sujet de la même manière quand il nous fait la réflexion suivante: "Connaître la pharmacopée négro-africaine s'impose maintenant pour trois raisons: d'abord parce qu'il est impossible d'ignorer plus longtemps la composition des médicaments utilisés tous les jours à travers l'Afrique Noire par 75% des populations; ensuite, que sous la poussée irresistible du progrès scientifique, on constate la disparition progressive des guérisseurs au savoir contesté; enfin que la somme d'informations qu'apporte à toute science le pragmatisme est de plus en plus considérée comme le point de départ de nouvelles recherches..." [30].

Fidèle à l'objectif auquel nous sommes assignés nous avons voulu voir à travers notre approche ethno-anthropologique et historique le processus de mutation que connaît le système médical Kongo qui doit guérir le zaïrois, qui souffrent des maladies modernes issues de son environnement aculturé, fusionnant le traditionnel et le moderne. C'est

pourquoi le chef-prêtre traditionnel, dont le rôle principal était politique et sacerdotal, administre aujourd'hui toute cure physiothérapeutique et psychothérapeutique. C'est dans le même ordre d'idée que s'explique la transformation de beaucoup de spécialistes guérisseurs en milieu urbain en thérapeute généraliste. C'est dans le même sens que nous expliquons l'entrée en force de la spiritopsychothérapie dans le système actuel de guérison chez les Kongo. Enfin c'est dans le même angle que s'explique la complémentarité qui existe, au niveau des patients et des guérisseurs Kongo, entre la médecine officielle et la médecine psychothérapeutique.

Mais il importe aussi de souligner que la multidimensionnalité dans la structure de guérison chez les Kongo n'est guère due à la rencontre de la médecine traditionnelle avec la médecine occidentale. Elle n'est pas, en effet, nouvelle dans l'ethos médical Kongo. Le va-et-vient qui existe actuellement entre les cabinets des tradipraticiens et les cliniques des médecins officiels, a autrefois existé ou existe encore entre la physiothérapie et la psychothérapie traditionnelle. Traditionnellement, la physiothérapie et la psychothérapie se complètent.

Pour les patients et les tradipraticiens Kongo, la médecine officielle est au même niveau que la physiothérapie, branche de la médecine psychothérapeutique qui ne guérit que la maladie organique. Elle ne peut pas soigner l'aspect non-naturel de la maladie. Ainsi, le patient Kongo dépense son imagination à la recherche d'un traitement complet quelque soit la distance qui sépare les guérisseurs lui assurant une guérison complète.

Il va sans dire que le patient Kongo, qu'il soit traditionnel ou contemporain, suit simultanément la physiothérapie et la psychothérapie. En se basant sur cette analyse de l'ethos médical Kongo, nous avons avancé l'argument que les pratiques traditionnelles médicales (physiothérapeutiques et psychothérapeutiques) sont à la base du va-et-vient entre les cliniques des médecins officielles et les cabinets des tradipraticiens, et de la complémentarité de la médecine psychothérapeutique et la médecine officielle.

Il y a donc lieu de noter que l'existence de la médecine traditionnelle a précédé l'écriture. Les africains se soignaient et se soignent encore avant que l'homme de science n'ait décrit systématiquement le système médical africain et aussi, avant que le processus d'intégration de la médecine occidentale à la médecine traditionnelle s'est-il développé et avant que le scientifique de la médecine occidentale ait prouvé scientifiquement l'efficacité des produits pharmaceutiques de la médecine traditionnelle. La multidimensionnalité du système de guérison n'est guère une dichotomie sur le plan structurel africain. Au contraire, elle est, pour l'africain authentique, un signe de complémentarité et d'intégration.

Quelque soit la motivation qui anime l'intérêt scientifique à la médecine traditionnelle, les tradipraticiens sont prêts à collaborer avec tout chercheur de bonne volonté qui peut les aider à revaloriser la médecine psychothérapeutique afin celle-ci occupe la place qu'elle mérite. C'est ainsi que la plupart des guérisseurs de Kinshasa reçoivent à bras ouverts tout chercheur sur la médecine psychothérapeutique dont la raison afin d'assurer la santé nécessaire pour le

maintien de la vie. Pour la philosophie de la médecine psychothérapeutique, la vie est l'union du corps, des sens, de l'esprit et de l'âme; la santé est une association intime du bien-être physique, mental, social, et spirituel [31].

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IV. STUDIES IN THE MODIFICATION OF MEDICAL CULTURE

The papers in this section are in sharp distinction to those of the preceding section. This is not because they dispose of radically different subject matter, but because the authors share premises with respect both to concepts and to method which are importantly and instructively different. Three such premises and differences stand out.

Directly (as in Comaroff's case) or by implication (as in Ngubane's), these papers all propose that an historical perspective is vital. Any other, for example, a synchronic, structural perspective as is often employed by those concerned to describe systems, will trivialise or miss emotional and ideological determinants of medical knowledge which are only really conspicuous in movement; so argues Young in one of the most forceful defences of this proposition. But to what end do we wish to expose these political, social or ideological modifiers of the medical sphere?

A second premis of these papers is a robust refusal to accept as uncontroversial and as sufficient that discrete sphere of 'the medical' assumed and employed by many papers in Section III, openly and eloquently defended by Professor Fortes in the Conference (a defence which has already been reproduced in Section II). Dr Comaroff begins the attack:

This essay calls into doubt the quest for 'theoretical closure' in the study of African systems of healing... [These issues]...run to the very heart of current theoretical debate in the social sciences.

Young shares this position for different and converging reasons, because he believes that failure to perceive therapy in its fullest setting, to see all the delicate and numerous bonds tying 'the medical' into that setting, will result not only in an impoverished understanding, but probably in an incorrect understanding. This is the price to be paid for believing that scientific enquiry gives access to knowledge free of ideological tint. Last goes further. Even to postulate the existence of 'the medical' as a system is too restrictive.

This leads to the third difference between these papers and those in Section III. We observe a conceptual transposition: a progressive disenchantment with description of system as a sufficient goal. The redefined goal (described by the second premis, facilitated by the first) is one where medical knowledge is now seen to be more than knowledge of system but at the same time less secure. Thus to the description of system is ascribed the important but contributory role of being a necessary means towards a larger but more nebulous end of reliable cultural description defensible in the chill winds of scepticism about interpretation which blow through African studies at large. When "last but not least we reach Last" (in Don Bates' felicitous phrase), we are in alien terrain; it is Looking Glass Land viewed from the standpoint of Section III, for Last has inverted M. G. Smith's cor-

poration theory. Systems are seen as comfortable dwellings with familiar furniture from which Last would unceremoniously evict us. How did we get here?

The papers in this section share not only three premises but also a practical concern to display and to integrate into their analyses a range of extrinsic determinants of medical culture. In (a) we see examples of the most immediately striking of these. Feierman presents political and economic forces impinging upon the 'therapy managers' and affecting their decisions in regard to the patient's treatment. In explaining the quest for therapy he is more impressed by this nexus than by any intense concentration upon the patient's world-view, because the patient, after all, is rather ill and little able to make effective decisions, whatever his diagnosis or volition might be.

If in Feierman's paper, attention centres primarily upon the small-scale, in Ngubane's looming, large political forces are seen in the shadows. In the first part of her paper she describes the response of patients to a Western medical establishment which brusquely claims exclusive proprietorship of the field, upbraiding patients who confess to consulting other therapeutic options; therefore the patients do not give full case histories and so the full curative potential of Western medicine is hobbled by its own practitioners.

In Section V Carol MacCormack suggests that these self-inflicted limitations are the probably inescapable consequence of a formal bureaucratic organisation of medicine in Africa, so what is described here by Ngubane is not unique to Southern Africa. But the pervasive abrasiveness and dogmatism of South African Western medical practitioners to which she refers is local, and is scarcely surprising in a political environment marked strongly in other of its dimensions by these same attitudes. Such relationships of power are the looming forces behind this paper; they are active agents in setting the context within which reside the African therapeutic options which Ngubane describes and whose practitioners, the herbalist (*inyanga*) and the diviner (*isangoma*), attend to 'the illness of the whole person'.

In describing them, Ngubane offers us a precious glimpse of the 'hidden history' of Southern Africa, hitherto little perceived, when she explains the relationship and procedures of herbalists and diviners set within a remarkably stable medical culture. The most striking and novel part of her paper is also that which focusses her explanation, namely the account of the informal but strong association of healers which serves to preserve the standards and to define the canons of the profession. Looking beyond the paper into the surrounding shadows, it is perhaps reasonable to see the very steadiness and continuity of the association of healers as a counterweight to the forces tending towards cultural, social and psychological dissolution in the peculiar South African situation. Such a reaction is in vivid contrast to the actual dis-

solution of structure portrayed by Last for a West African environment in (c).

The shaping of intellectual systems of marked resilience under colonial overrule also forms part of Comaroff's paper, providing one of its two major pivots. But what she calls 'empirical closure' is the junior of the organising principles of (b). The senior is what Young calls 'ideological resonance'. Both papers probe deeply the epistemological consequences of attending not only to political and economic but also to environmental, ideological and, in Young's case, also to technical determinants of the medical sphere. Both seek to understand how the paradigm of Western medicine has achieved its present ascendancy in the study of medical cultures; both take seriously the need to explain the heavy investment of intellectual capital which underwrites the surface stability ('recursiveness' Young calls it) of therapeutic behaviour. Thus it is the widening spectrum of extrinsic forces brought into play which causes both to show increasing restlessness with systematic descriptions.

Young blames structural and (in his definition) 'empiricist' casts of mind for perpetrating the myth of ideologically untainted science. Last proceeds to a logical extreme in (c). Here the range of determinants is vast, vague and sovereign. Like Ngubane he studies a situation with great external pressures but the response to these pressures which he observes is entirely different—dissolving not bolstering the established order of therapeutics—and it leads him to question at root the legitimacy of any intellectual enterprise which seeks understanding by reductive categorisation. For Last 'not caring', which is quite different from actual ignorance, may be the real and humbling explanation of the 'don't know' informants. So he favours a Socratic wisdom and that is how we reach his prescription of bitter medicine for systemic description.

Thus Sections III and IV mobilise with formidable and close argument and with much ethnographic detail two fundamentally different conceptions of the field. Both urge the reader to choose.

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IV (a) POLITICS

THERAPY AS A SYSTEM-IN-ACTION IN NORTHEASTERN TANZANIA

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Abstract—This article is an attempt to find the systematic bases of therapeutic organization in north-eastern Tanzania, based on recent research in Galambo, Lushoto District. The whole of Tanzania suffered a long period of very low investment in either health care or public health during the colonial period. During that time the costs of reproduction of labor were borne in the countryside, mostly by women and children. Neglect by the colonial powers left a sphere of rural autonomy in medical matters, in which a number of therapeutic systems and sets of ideas flourished side by side, with no one therapeutic tradition establishing an effective monopoly. How then is a socially approved course of therapy determined?

One possible answer to this question—based on shared world-view and shared assumptions about the causes of illness—is rejected. Evidence shows clearly that individuals disagree fundamentally on theories of illness causation. Radical scepticism concerning the validity of spirit-causation of illness, and of sorcery-explanation, is common.

The boundaries of the system are shaped by the power of the government and (among those who are Christians) the authority of the church. The government has decided that cholera and tuberculosis must be treated within the biomedical tradition. The church tries unsuccessfully to limit its adherents to the use of hospital medicines or simple herbal therapies.

The system as it works in actual practice is shaped by two principles. First, treatment is diagnosis. The only way to know with certainty the cause of a particular illness is to treat that cause and see if the condition improves. In many circumstances therapies are tried primarily to advance the process of diagnosis. Some treatments are structured so that only a part of the treatment need be tried initially, for diagnostic purposes, with the rest completed if the initial results are positive. The second principle is that the range of therapies is determined by the range of therapy managers. Therapeutic options supported by a relative or neighbor of the patient are almost never rejected, even if the patient or other therapy managers disagree with the assessment or therapeutic theory. Because of this each individual whose illness continues over a period of time tends to be treated by a wide range of practitioners.

COLONIAL HEALTH CARE

This is the first report on how rural villagers organize the care of the ill in northeastern Tanzania. The region is one where historical forces at work over the past 150 years have created great material poverty, while leaving room for the rich elaboration of cultural forms, based on but not limited to the ancient historic culture of the region. A brief sketch of this historical process is needed in order to understand the current bases of therapeutic pluralism.

In northeastern Tanzania the local religious and healing traditions of the well-watered interior highlands were already interacting with the Afro-Islamic coast in the period of intense slave and ivory trade which preceded the colonial intrusion of the 1880s [1, 2]. The European conquerors, first German and then British, established an economy based on settler farms, plantations, and peasant production of cash crops, in which only the most minimal public investments were made in health and education [3-9]. In 1922-23 the British government at home in the metropole allocated 21.9% of its budget to health. But within the tiny budget of colonial Tanganyika only 6.54% was expended on health [10]. In 1949 the government health service, in which many establishment positions were vacant, employed only one medical officer for every 200,000 people [8, p. 60]. Several

years earlier the medical director of Tanganyika had described his establishment as a token service [6, p. 161].

The absence of adequate medical services was one element in a larger economic pattern characteristic of colonial rule in Tanganyika: the costs of the reproduction of labor were borne in the countryside. In other words, Africans came to work on plantations, or settler farms, or in cities, but the education of their children, and food and medical care for their families, were not provided for by wages or as fringe benefits of employment. Wages were usually adequate only for the subsistence of the worker himself, for taxes, and for the purchase of consumer goods, such as cloth, which quickly changed from luxuries to necessities. This meant that men worked to pay taxes and buy cloth, while their wives back in the village grew food for themselves and their children. Medical care, in most cases an irregular and unpredictable expenditure, was paid at the expense of cloth purchases, or through the sale of cattle herded mostly by children, or through the sale of cash crops grown by women and children at home. Even in areas where men stayed at home to raise export crops a substantial proportion of reproductive costs—food, and the education of children at home—was paid for by the labor of the women and children themselves, so that men could concentrate on growing crops for sale. The few

exceptions to this pattern were found in the richest exporting enclaves where cash incomes were adequate to pay for school fees and medical treatments.

The removal of the social costs of labor to the countryside and to the household was characteristic of an exploitive economy, but it left people in rural areas free to create a rich world of conceptions and practices relating to health and well-being, and especially the care of the ill. Peasants were exposed to a wide world of experience: some made their way to the coast to trade or work and returned as Muslims. All who travelled became acquainted with the healing practices of distant Africans within Tanganyika. Christian missionaries presented still other conceptions of health, illness, and therapy, some based on well-being as a consequence of religious faith, others on the efficacy and moral necessity of scientifically-based care, or of practical hygiene at home. Villagers could consider all these influences when working out their personal or collective ideas of health and illness, with little fear of forcibly imposed biomedicine. So long as the colonialists were unwilling to provide the resources for widely distributed medical care, they could not effectively control the alternative medical practices which flowered and diversified through the period.

With the end of colonial rule in 1961 the modern national government took over, inspired by ideals of democratic socialism. The responsibilities for health and education which had not been taken up by the colonial regimes were enthusiastically carried by a poverty-stricken independent government. Adult literacy rates have increased over the past 19 years from about 10% to about 70%. This means that individuals read about and reflect on biomedically-based health care, while continuing to reinterpret all the other current therapeutic ideas in the light of personal experience. At the same time medical services in the rural areas have expanded enormously [11]. But this has not led to the decline of the diverse practices which evolved over the previous 100 years.

The history of colonial health care as presented here, with the abdication of responsibility by colonial governments and the elaboration of practices at the local level, is a fair representation of what happened in most colonial African territories. Therefore, the actual organization of most African health care cannot be represented by either a picture of traditional tribesmen following age-old ideas of health and disease, nor one of a simple conflict between traditional and modern practices. The real picture is one of enormous rural autonomy, variety and creativity. But this variety presents the social scientist and the health planner with difficult problems of analysis or action.

DIAGNOSTIC AND THERAPEUTIC CHOICES

Two of the most salient characteristics of modern village health care—the diversity of ideas and practices, and the absence of an effective monopoly by either the state or any one set of local healers—make it difficult to understand how the social management of therapy is arranged, how diagnoses are made, and how therapies are chosen in actual cases of illness. Because of the diversity of ideas, those who manage therapy can in some cases find no agreement on a

single theory of causation informing any one coherent set of therapeutic practices. And because of the absence of effective monopoly, cases exist in which no authoritative healer is heard. Admittedly, in some modern African settings a diviner sets the entire course of therapy, and in others the M.D. has that authority, but in many settings no one healer has the authority to decide definitively on cause or cure. In many of the nonmedical contexts in which a diverse society offers a series of cultural alternatives—whether of religious belief, style of self-presentation, or political ideology—the pattern which emerges is mediated by individual choice. But this cannot be the case with medicine, for in every society the condition of illness requires that the individual suffering disability and distress be cared for, not care for himself. A cultural and social choice must be made—a choice significant for the individual's existence—yet the individual cannot decide. How then are the course of diagnosis and therapy determined?

FIELD OF STUDY

It is this question to which the remainder of this essay is addressed, with specific reference to a single village of northeastern Tanzania, Galambo, where the present author together with Dr Elizabeth Feierman observed and participated in the health care of about 160 households between August 1979 and June 1980. The researchers chose the village for several reasons. It was about 3 miles from a Lutheran mission hospital at which the physician member of the research team could work as a volunteer half-time, have access to laboratory facilities, and follow the course of illnesses of those villagers who were either treated as outpatients or admitted. The village is in the Usambara Mountains, where both researchers had lived and worked between 1966 and 1968, and where they had learned the local Shambaa language in addition to Swahili.

Another reason for the choice was that the village is typical of the whole of northeastern Tanzania on a number of counts: residents include Christians and Muslims, urban wage-laborers with rural homes and peasant farmers, bureaucrats and traders, the relatively well-to-do and the very poor. The argument could be made that the village is atypical in its very diversity, but the researchers' experiences (and survey work) in other villages of Lushoto District reveal that similar patterns are widely spread. To some extent the picture of diversity is a consequence of a particular method of data-gathering. If one interviews all those who are in the village on a given day one gets a picture of a relatively homogeneous peasant farming population, divided only by religion, including a number of women whose husbands are absent, and some households in which relatives are visiting. However, if one inquires as we did about all those who have homes in the village, or about the present residence of the immediate relatives of all those interviewed, one gets a picture of a network spreading from the village to cities and other rural areas, with the village as a center and home in which crops are grown for those who are absent, children sometimes cared for, and to which those who have left will return (and do return as the year goes on). This picture is

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completed by gathering the work histories of all the men who are now peasant farmers, most of whom at other stages in their lives worked as clerks, cooks, agricultural laborers, factory workers, teachers and even peasant farmers across the rest of east-central and northeastern Tanzania.

CAUSES OF ILLNESS

In the common discourse of Galambo—indeed in the discourse of most people in Lushoto District, and with suitable translations in most of Tanga Region—five kinds of causes of illness come into play. To say that the five are a part of common discourse does not imply that each individual uses all five, nor that any one illness must be definitively attributed to a single cause, nor that these five form a conscious system in folk thought—simply that if one listens to people talk about illness they refer to one or more of these.

The first category of causes is referred to when people discuss 'an illness of (brought by) God', *utamu wa Muungu*. This term can only be understood as part of a pair, in which the complement is *utamu wa mntu*, 'illness of (brought by) man'. 'Illnesses of man' are those brought by sorcery, while those of God simply happen, with no moral cause. The causation of illnesses of God is close in its implications to the English term 'natural', meaning related to general principles of the behavior of things, as opposed to the artificial intervention of one's fellow men or women. Illnesses of God can be ones which just happen by themselves. An example of this would be the illness syndrome *duazi*, which includes cough, congestion of the chest, the coughing of phlegm, or congestion or pain of an arm or leg. *Duazi* is said in most cases to simply happen. A more severe cough or painful joint swelling is sometimes referred to as *nkambaku* (literally 'the bull'), which comes by itself, but which is also made worse when the person who is ill eats beef or mutton, and especially the fatty portions of these meats. An individual afflicted with *nkambaku* does not 'agree' with fatty meat. 'Illnesses of God' can be brought by insects, as in *mbu* ('the mosquito'), the pre-colonial name of the illness characterized by alternating fever and chills, now often called, in either Swahili or Shambaa, 'malaria' [12]. Knowledge of illness causation which comes either through health education or among those who work in dispensaries is seen by most people as relating to illnesses of God.

A second category of causes, one which is not distinguished by a separate term in Shambaa, is that of illnesses which people bring upon themselves either through accident or neglect, but not through ill-will or sorcery. These could imaginably be merged with 'illnesses of God' except for the fact that the immediate cause seems clear enough so that people do not need to specify that this is an illness of God. When someone falls and breaks a leg, for example, the causal sequence is self-evident in most cases. (In unusual cases one can ask why this person happened to fall at this time, in which case the breaking of the leg is still seen as a natural consequence of the fall, but the fall itself is interpreted as being caused by a person.) People also discuss some illnesses as caused by neglect, as when a child is weak and sickly because he or she has not been given enough food. Some villagers

attribute abscesses to the inadequate care of clinic aides at cleaning hypodermic needles.

A third category of causes is sorcery (*ndoghwa*, or *ushai*, or *utamu wa mntu*). The attribution can come in an enormous variety of forms. The kind of sorcery is sometimes identified by the symptom, as in *kiwete*, a limp or a crippled leg. Sometimes it is defined in terms of the social characteristics of the victim and of the presumed sorcerer, as in *zongo*, which explains the illness of a young child in terms of attack by a mature woman. Some forms of sorcery are identified by symptoms within the category 'illnesses of God', as in *duazi* above, but with the illness in this case ultimately induced by the sorcerer, so that both the 'natural' course of the illness and the sorcerer's attack must be treated. In some cases the sorcerer's attack is said to be directed at the diagnostic process, as in *kisimo*, in which case diviners systematically misread the cause of the illness unless the *kisimo* itself is addressed directly.

A fourth set of illness causes are *majini* (singular *jini*, from the Arabic *djinn*), spirits which come in a great variety of forms, from *jini kizalia*, the spirit with which an individual is born and which evolves a personal relationship with its host over a lifetime, to nature spirits associated with holes in trees or with caves, to the spirits of social categories (the *jini* of Maasai). Still other *majini* are created by sorcerers, who send them to the afflicted person. Aside from the sorcery-induced *majini*, the researchers have never heard anyone define a *jini*-illness as one which is either an illness of God, or an illness of man. The *majini* appear to be a separate category altogether, outside the God-man distinction. However, some forms of illness of God can be induced by a *jini*, in which case the *jini* and the symptoms are treated separately.

A final set of illness causes includes acts of the individual's moral will, other than sorcery. The most important of these are oaths which lead to illness. For example *nyungu* (literally 'the cooking pot') is a form of suicide, the name also being given to those illnesses which are understood to be prodromes in the process of suicidal death. In this form of suicide a woman breaks a cooking pot, rubs shards of it together over water and pronounces an oath saying she wishes to die. The father's or mother's curse (*ute*) is another oath, in this case leading the son or daughter in the most extreme cases to wander the countryside, trailing vines and babbling incoherently. Similarly an individual who steals from a field or a house protected by magical charms is said to be harmed by his or her own act.

These five sets of causes are a rough outline of the range of language in which people speak of illness. They are not arranged in a tightly ordered hierarchy of theories, nor is every cause accepted as valid by all the residents of the village. One of the unexpected consequences of a field method which led the researchers to discuss conceptions with substantial numbers of individuals was the accumulation of evidence that radical scepticism is a common element in this folk medical system. The following statements, recorded during interviews in Galambo, will demonstrate the range of expressed opinion, from those who think within an idiom of causal thought, never ques-

tioning it, to those who say that the credulous are fools. The first set are all discussions of *majini*, all by Muslims, the first a middle-aged woman:

I've had a cough since my childhood. If I slept in my own house I didn't cough, but if I stayed overnight in the house of a friend I couldn't sleep. It's kwe kwe kwe kwe kwe kwe kwe kwe (the sound of coughing). It was the spirits. The spirits did not wish for me to sleep in another person's house. (As I became older, the cough affected me more of the time.) For five years I neither slept nor did any work. This is the sixth, in which I have been cured . . . Last year at weeding time I began to be treated for spirits . . . the oracle said it was the spirit of *mzuka*. . . I held a series of possession seances, together with the ritual pouring of water. Powdered herbs for the *jini* came first. Then I continued with possession rituals and pouring water . . . Now I am completely cured. . .

Ethnographer: What will you do if your cough returns?

Informant: It can only return if I don't complete the correct course of treatment. But if I complete it, the cough cannot return.

From this woman's description, and others like it, one would conclude that the *jini* exists in a closed system, beyond question. If the cough returns, then it is a sign that the treatment was not completed correctly. This informant, dozens like her, and healers of their conditions, would all describe *jini* illnesses in roughly the same terms. But a neighbor of this woman, a man in his sixties, discusses *jini*-illnesses in a very different tone:

If someone starts talking about a *jini* I know he has a nail pushed aside (that is, a screw loose). Each one of us is born with twelve elements of intelligence. Whoever talks about a *jini* has two missing, or at least one.

Yet another neighbor, a man in roughly the same age group, discusses spirits in these terms:

Majini are things of this earth. If they can be the reason some people are poor, then we would all be poor. (I have no *jini* illnesses.) If you enthrone a *jini* in your life then you are forced to find the medicine for it. Those who are ill because of *majini* become ill because their ancestors respect the *majini*.

Ethnographer: Did your ancestors respect *majini*?

Informant: Yes, some of them did.

The radical scepticism of the second informant is tempered in the account by the third, who describes *majini* as a result of individual choice and family tradition, by which he is himself unaffected.

Discussion of sorcery are characterized by a similar range of variation. Those who would describe sorcery as an unquestioned part of a closed system are numerous, and not quoted here. For the present purposes the sceptics are more interesting. Here are the words of an 80-year old Muslim man afflicted by both pain and a pounding sensation in the chest:

I don't consult diviners. Divination is mutual self-deception. Some said that this illness is a consequence of *mashai* (a kind of sorcery not specifically directed at the sufferer, but which harms him as he passes by). When I thought about it that seemed unlikely, and I stopped going for help.

Compare this with the words of a Christian woman in her thirties:

Children are a secret of God. If He wants to take them from you, He will do it.

Ethnographer: But some would say (if a child becomes ill or dies) that is sorcery.

Informant: Yes, but even if a sorcerer does what he can, if God has not ruled that the child should die, he does not die.

This last woman must face the problem, if a sorcerer attacks, of whether to rely on God, or whether to take additional measures to influence events in the world of people.

The evidence for folk scepticism directly contradicts Horton's characterization of African traditional thought as a closed system, in which no language exists to challenge shared assumptions, or accepted causal explanations [13]. It is beyond the scope of this essay to answer the question of whether the scepticism is a consequence of recent changes, or whether it may have existed historically in the local culture of the region. One thing is clear, however, from the researcher's own experience in successive field research periods asking different questions. Field research which focuses on the elucidation of difficult concepts in folk thought, without systematically searching for individual variation in thought, necessarily creates a closed system. Those best able to explain how *majini* influence people's lives are those who accept the conception. If one struggles to understand the subtleties and complexities of the conception it is possible never to understand fully (as this researcher did not between 1966 and 1968) that there are those who doubt the validity of the whole conception. It is especially easy to do this if one dismisses sceptics as those touched by 'westernization', without asking who they are or why they doubt.

In any event, the scepticism makes impossible a system of therapy management based on shared assumptions about what causes illness. If two brothers, for example, disagree about the validity of *jini* explanations, then their management of therapy for a third relative must be based on something other than shared assumptions about the causes of illness.

THERAPEUTIC ALTERNATIVES

An alternative way of characterizing the plural therapeutic system, in place of the sketch of conceptions, is in terms of the range of therapeutic alternatives—what kinds of healers are available, and what helping actions are commonly taken? First, six traditional healers (*waghanga*, singular *mgghanga*) working on a close to full-time basis, live in the village [14]. Of the six, five actually practice locally, and one practices in Dar es Salaam. Each of the five local practitioners combines a very general practice—treating all those who come for a variety of ills—with special knowledge of a narrower range of conditions and treatments. One, for example, treats most of the village's cases of *degedege*, or *ndeghe* (literally 'the bird')—convulsive movements of infants and young children—but also treats a wide range of other illnesses brought to him. Second, a number of villagers serve as part-time practitioners, some performing a single inherited set of treatments upon request, while others aspire to become full-time practitioners. Third, the villagers resort to some specialists who live outside the village. The healer most frequently resorted to in serious cases of spirit-induced illness (i.e. caused by *majini*) lives in a neighboring village. Fourth, a number of the old women of the village serve as mid-

wives, assisting in the labor of those women who do not choose to go to the hospital for childbirth. Fifth, common herbal cures are known and used in every household. People gather leaves or roots and prepare medicines without consulting any specialist, although acquaintances, passing on the road or stopping to visit, often suggest remedies. Sixth, private shops both in the village and in the nearest town (three miles away, near the hospital) sell aspirin, chloroquine, prepared cough medicine, and worm medicine. One shop in town sells powdered herbal cures prepared at the coast. The market in town to which most women go at least once a week, usually has several peddlers of powdered herbs. Seventh, villagers go for either outpatient clinic treatment or are admitted as inpatients at the mission hospital, which charges fees and provides a relatively full range of medical services. Eighth, a free government dispensary is available about three miles away in the opposite direction from the hospital. Ninth, at both the hospital and the government dispensary a free maternal and child health clinic is available for advice, inoculations, and health screening. Tenth, many households keep stocks of pills saved from previous hospital or dispensary visits for self-medication. Eleventh, the researchers themselves provided health screening and some treatment, as well as preliminary training for possible future village medical helpers.

Not all of the eleven therapeutic alternatives are freely accessible and interchangeable in every quest for therapy. In some circumstances the power of the government and the authority of religious institutions either foreclose particular options, or require certain choices. When the government is concerned about major threats to public health, citizens are not left free to interpret illness causes or to select therapeutic options as they choose. If tuberculosis is identified in the hospital or dispensary, the patient is required to follow a course of treatment within the biomedical tradition. Cases of undiagnosed tuberculosis remain outside the government system, but once the condition is diagnosed the open system of choice is closed. Cholera is another condition on which the patient and therapy managers have no freedom to choose their own label for the condition or their own treatment. During the period of research in Galambo one resident of the village was imprisoned for returning home from a cholera quarantine area without permission. Another resident of a nearby village fought government and party officials over the question of whether his father had died of cholera or some other condition. His actions ultimately led to his arrest. In Kigoma—in western Tanzania—an entire group of party officials were removed from office in 1979 because they challenged cholera rules. In Lushoto (the District under discussion here) official posters can be seen which declare that the symptoms of cholera should not be interpreted as *usinga* (Swahili, a form of sorcery, known as *ushinga* in Shambaa) or as *vyungu*—cooking pot suicide. On the question of cholera, as on tuberculosis, the government has decided there will not be freedom to act on alternative interpretations.

The chairman, secretary, and governing committees of the village are elected by the villagers to serve as functionaries of the ruling party and of the govern-

ment. Village leaders find it easy to use their official positions and village resources for public health measures within the biomedical tradition, but not for measures in any other system of medical thought or action. The village has succeeded in getting piped water. Village authorities enforce party requirements of adequate latrines. Village meetings are used to transmit information on nutrition, and on the importance of boiling water. But when powerful village sentiment and persistent demands call for the hiring of a sorcery-eradicator, the legal obstacles are daunting. Under these circumstances leaders tend to delay sorcery eradication indefinitely, rather than become entangled in difficult public issues.

The Lutheran church, the only Christian denomination with adherents in Galambo, also takes strong positions on medical question, although without the government's ultimate power to enforce its position. Members are told by their leaders in the church, and freely affirm to one another in many cases, that only two kinds of therapy can legitimately be used by Christians—therapy in the biomedical or Western tradition, and herbs known in the local tradition. Herbs are used, however, in a great many of the therapies carried out by village healers—therapies which are denounced by the church. The crucial distinction between acceptable and unacceptable herbal therapies hinges on *matabano*—the spoken formulae with which the healer addresses the herb and names its powers. Herbal therapies are acceptable only so long as the formulae are not pronounced. In actual practice the great majority of village Christians do not ask local healers whether formulae are being pronounced, but simply use the medicines which are available. The one area in which religious adherence makes a difference is on the question of *majini*. The therapy for illnesses induced by these spirits draws on the imagery of Islamic prayer and ritual. *Jini* therapy is therefore usually not sought for Christian patients, although exceptions to this rule are made either through the patient's very personal choice, or in difficult cases in which all the other possibilities have been eliminated. Many Christians think of conversion to Christianity as being, in and of itself, a cure for any conditions brought by *majini*. One consequence of this is that many of the troubling cases which would be interpreted by Muslims in terms of the action of *majini*, are attributed by Christians to sorcery, on which popular Christian sentiment is ambivalent. A very few Christians say that sorcery can only harm those who lack faith; most say that in a Christian world sorcery would not exist, but that people living in a world where sorcery is practiced must take measures to heal themselves. The ambivalence, however, leads most Christians to keep their sorcery therapies secret. In many cases they were revealed to the researchers by people who were neither the patients nor the therapy managers, usually the healers.

Muslim religious teachers were more tolerant than Christians of a wide range of therapies. The only note of disapproval was sounded on the subset of *jini* therapies which call for drumming most of the night so that the patient can be possessed by his or her *jini*. These were seen as exceeding the normal religious bounds for dealing with spirits which in one form are a major part of Quranic cosmology.

Among healers, it is clear that the discomfort felt by hospital medical staff at sharing patients with traditional healers was not reciprocated. In numerous cases therapy managers were advised by their family or neighborhood traditional healer to try the hospital first, and think again if that did not work. The healers not only recommend the hospital, they recommend competing therapies practiced by their fellow healers. In both the religious realm and the realm of healing specialists, it is clear, the closer the association with the European tradition and with education of a kind brought from Europe, the greater the degree of intolerance of alternates; the more therapies are based on either Islamic or local thought, the greater the degree of tolerance.

The review of church and governmental authority reveals limitations on the range of choice—whether limitations in the permitted treatment of cholera, or in the unacceptability of *majini* explanations among Christians. It defines the parameters within which a system functions for the regulation of diagnosis and therapy. It does not define the bases of that system. Aside from some few conditions on which people draw what seem to them self-evident conclusions—people with broken legs go to the hospital—two basic principles structure diagnoses and therapy. The first of these is that *treatment is diagnosis*.

Assessing an illness—its probable etiology and appropriate cure—is done in a number of ways. Some people (not all) consult diviners, although it is legitimate, as we have seen, to reject or ignore the oracle's pronouncement. Friends, neighbors, and relatives of the patient can all venture opinions. But the only conclusive indicator is how the patient responds to treatment of a particular kind. Often treatments are undertaken for purposes which are predominantly diagnostic. For example, people sometimes go to the hospital in order to be reassured that their illnesses are not sorcery-induced. Consider the following description, by the patient, of a conversation with a well-meaning expatriate doctor:

I went to the hospital because my heart was racing. The heart was pounding. When I walked I would become dizzy and fall. My eyes did not see. If I simply sat like this I was comfortable, but nothing felt right. . . . The doctor examined me. . . . he said, your heart—the normal measure is if you go up to eighty. You have gone up to eighty. Your condition looks fine to me. That was when I really became afraid because there was no hospital medicine. My relative brought his medicine horns and medicine gourds because we knew that it was sorcery.

The most profound misunderstanding came at the moment when the doctor thought he was reassuring the patient, while actually informing him that his condition was induced by sorcery. The case is unusual only because it involves extended consultation and explanation. The more typical hospital visit would be one by an outpatient who is given pills and then judges for himself the next day whether his condition has improved, or whether the cause is likely to require a non-hospital treatment.

If treatment is diagnosis, then it is important to identify what constitutes a treatment. A treatment is the administering of medicines by someone who is reputed to be fully competent. In the case above no actual medicines were administered. But the fact that

a physician—an authority at the highest level in the hospital hierarchy—was understood to say that there was no medicine available—foreclosed the possibility of hospital treatment. In many cases herbal medicines are given in a scattershot way, in order to assess the likely etiology of the illness. The only condition is that cures may not be mixed together at the same time, because then it would be impossible to separate treatments and their particular effects. Local healers are as disturbed as hospital staff that they are forced to treat hospital patients in secret at night, because hospital drugs may be administered at the same time, with unpredictable effects. At home, healers often give a part of a cure, so that the patient or therapy manager can diagnose the illness before going to the trouble of a lengthy therapeutic process. For example, in some suspected cases of *jini*-induced illness, the patient is simply given the appropriate powdered herbs. If these seem to have an effect, then the patient can proceed to the ritual pouring of water, then offerings to spirits, and possibly a night of drumming. If during the first steps—either the powdered herbs or the pouring of water—the patient does not improve, then *jini* causation is eliminated as one possibility in the differential diagnosis. The conditional nature of treatment is recognized in the invocations which accompany the pouring of water:

If it is you (*jini*) who have bound the patient, we beg you to release her so that we know it is truly your work. We will then give offerings at the time this treatment is ended.

This is the invocation made as part of treatment as diagnosis. It is not a part of divination. However, not all treatments can be broken into diagnostic segments. The treatment for the sorcery conditions known as *ushinga*, for example, must be performed at a single session which either cures the symptoms, or eliminates the diagnostic possibility.

Since changes in the patient's state unfold as a process in time, the diagnostic judgments are clearest when only a short time elapses between treatment and improvement. According to one of the most widely respected healers in Galambo, any treatment that can be said to have worked must have its effects within one day, or at most two. This seems an accurate statement of how therapy managers actually judge the effects of treatment, although improvement must be quicker than this in acute cases. The elapsed time is measured from the completion of therapy, and so it has quite different overall durations depending on the temporal organization of the therapy itself. An outpatient clinic visit in which pills or liquid medicines are given must be followed by the patient's improvement within two days in order to be judged successful in both identifying and treating a condition. Under these circumstances, requiring follow-up visits would improve the perceived success rate of clinic treatment by lengthening the relevant time span. They would presumably also enable clinic staff to assess the effects of the initial treatment. The 5-day course of penicillin injections gives the therapy managers 6 or 7 days in which to judge the efficacy of the treatment. Many sorcery treatments are completed in a single day, and therefore subject the healer to a narrow time frame. The form of therapy with the greatest temporal latitude is that relating to *majini* spirits. Some therapy

managers use herbal powder diagnostically, but most proceed at least through water-pouring, which typically lasts 7 days, before making a judgment. Some patients become involved in *jini* therapies which last for years. In one case which unfolded during 1979–80 the patient needed to get herbs from the lake in a distant valley and the rock outcrop at the top of a mountain. Each trip took months of planning. It is not beyond belief that by now, months later, she is being sent to the sea shore for still more medical ingredients. The temporal relationship between treatment and diagnosis makes chronic illness difficult to deal with and *jini* therapy attractive in its treatment.

Therapy managers differ widely from one another in the way they define a single treatment for diagnostic purposes. One patient might attend an outpatient clinic for a single day before rejecting the entire category of 'hospital illnesses'. Another might insist on going through series of tests and consulting several members of the staff before giving up. For some, one sorcery-treatment is enough to rule out the whole category 'illnesses of man'. For others, one sub-category of sorcery after another is treated.

THERAPY MANAGERS

The second principle of the organization of therapy, like the first, sounds initially like a truism. It is that the range of therapies actually used is as great as the range sought by the therapy managers. Therapeutic options which are suggested by a relative or neighbor are very rarely rejected, especially if the persons making the suggestion is willing to take time or spend money. This helps to explain how patients ultimately come to try a full range of therapies even though any one patient may strongly prefer some therapies and be openly sceptical of others. One woman in her seventies felt there was little that made sense in hospitals, and no likelihood she could be cured there, but went there happily because her favourite younger brother was a hospital worker who trusted hospital medicine and paid her fees.

The range of therapy managers is not always very wide, especially in illnesses of short duration, and where the patient is clearly a dependent of a mature but vigorous male head of household. A young child with a vigorous 40-year-old father at home may well have therapeutic decisions made only by his father, unless the illness becomes alarming or goes on for a very long period. When one person makes the decisions he usually tends to broaden the range of therapies he considers, whereas if he is one of five therapy managers for his old mother, who is ill, he will more likely take charge of a single strand of therapy—a single diagnostic and curative option.

Within the village network everyone has a close relation or trusted friend who is also a healer, and so the healer is one of those consulted on the pattern of therapy to be pursued. It is in this role of traditional healers as therapy managers to their own relatives and neighbours, that they recommend their own competitors. In this role they think about the full range of therapies, and not only their own specialties. The healer who helps relations also tends to try out any of his own remedies which may move the diagnostic process forward. The treatments are cheap and easily

available when coming from a relative, and therefore convenient steps in the overall process. On a number of occasions healers told me, when treating relatives' illnesses, that they were not certain the treatment was the correct one, but that it should be tried before the patient went further afield. Giving a medicine—any medicine—is also a way of showing that you care.

As an illness continues over a period there is a presumption that any therapy suggested by someone close enough to the patient to be concerned is worth trying. Since treatment is diagnosis, the only acceptable way to prove a therapy manager wrong is to try the treatment in a time-limited form. Only the patient herself or himself could decide to undertake a *jini* treatment lasting years—a form of treatment which leads the patient ultimately to the status of healer. But within time-limited forms, therapies are accepted even by those who profoundly doubt the wisdom or possible efficacy of the treatment.

One old lady suffered stomach pains for several days. A relative of hers, who is a part-time healer in the village, came to divine, and announced that the illness was caused by *zongo ja ndai*, a kind of sorcery. He treated the condition immediately, while all others in the house privately discussed the ridiculousness of the oracle's assessment. But it is difficult to refuse well-intentioned offers of help and at the very least the diagnostic process is moved forward by the treatment.

CONCLUSION

At a time and place when individuals have adopted idiosyncratic ideas about the workings of nature, the causes of illness, and the efficacy of competing cures, the one thing everyone agrees on is that help is important in becoming better. The worse the patient's condition, and the longer it continues, the greater his or her need of help. It is the need for help which is central. And it is the need for help which widens the range of therapy so that Christians and Muslims, educated and uneducated, those versed in traditional healing and those ignorant of it, experience much the same therapeutic process in spite of individual differences. For the pattern of kinship relations, and of mutual assistance, stretch across religious or educational divisions. Patients do not express annoyance at the range of measures taken, even when the measures extend far beyond those which would be personal preferences, for the patient needs to be cared for by others, and in Tanzania as in the United States, the patient needs to know, when in grave distress, that every possible measure is being taken.

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ASPECTS OF CLINICAL PRACTICE AND TRADITIONAL ORGANIZATION OF INDIGENOUS HEALERS IN SOUTH AFRICA

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Abstract—Significant differences in medical practice may be noted between Western-trained and indigenous healers in South African society, particularly in terms of the doctor-patient relationship, the preparation of case histories, diagnosis, and referral to other types of practitioners. A further distinction may be noted, within indigenous medicine, between the *inyanga* who is usually male and uses African medicines in a non-clairvoyant manner, and the *isangoma* who is female and uses medicines and techniques in a clairvoyant manner. The former observes and examines patients directly and ministers to the whole patient; the latter usually consults with a patient's family and relies on spiritual insights to interpret the causes and consequences of suffering. The networks of *isangoma*, spanning the Nguni-speaking societies of eastern South Africa, in particular among the Zulu, are given special attention here because of their role as 'morality custodians', maintaining a meaningful world view in a society beset with rapid changes and deep contradictions.

INTRODUCTION

I want to offer here an account of some of the results, not previously published, of my research among the rural Zulu of South Africa. There are some cursory comments on, or related to, this material to be found in my published writings, but I have not written about it at length. It concerns, first, the contrasts between the clinical behaviour of white and other Western-trained practitioners on the one hand and of indigenous healers on the other; and second, the manner in which the practice of the diviners among the latter is controlled and disciplined, as well as facilitated in certain ways, by their own traditional organization. Ironically, it is this category of healers which shows the greatest concern for professional standards and upright conduct which has found least favour in Western eyes and is least condoned officially.

DIFFERENCES BETWEEN WESTERN AND INDIGENOUS MEDICAL PRACTICES

An African in South Africa who requires medical attention has available both Western-trained doctors (with accompanying health institutions such as the hospital) and indigenous healers of two main kinds—the *inyanga*, who is male and uses African medicines but has not clairvoyance, and the *isangoma*, who is usually female and has clairvoyant powers as well as a comprehensive knowledge of African medicines. As I have mentioned in my book, there are in addition specialists in particular disorders, and faith healers [1].

From at least the patient's point of view, choosing between Western and African forms of medical treatment entails rather more than differences in assumptions about the causes of illness and the appropriate mode of cure. As a matter of common observation in most parts of Southern Africa, the two kinds of practice contrast strikingly in at least four major aspects of the doctor-patient relationship, namely communi-

cation, preparation of the case history, information about diagnosis, and the view taken and expressed of resort to other practitioners.

Communication between an African patient and a Western-trained doctor is hampered especially by the common need of the latter to use an interpreter, since rather few such doctors have any command of African languages. The risks of wrong translation or inappropriate phraseology are obvious.

In Western practice, further, the patient is expected to give the history of the illness and describe the symptoms before being examined by the doctor. After the examination the doctor prescribes or dispenses medicines with very little explanation, if any at all, of what his diagnosis is, or of the possible cause of the illness. Often the doctor himself is not entirely sure on these points, since taking specimens for laboratory examination is rare in private practice.

Last, a particularly striking tendency in Western medical practice in South Africa is for the doctor or the nurse-interpreter to reprimand the patient at some length for wasting time with African healers instead of coming straight to the Western practitioner and institutions. Little thought appears to be given in these harangues to the likelihood that a patient must travel a long distance, or would have difficulty in finding ready cash to pay the doctor, or finds other obstacles to using the Western-trained doctor. Generally the patient is treated in a condescending manner which reinforces the lack of mutual understanding and makes him or her feel ill at ease, rather like an inmate in one of Goffman's total institutions.

It is important to realize that the effects of this distance and tension in the relations between patient and practitioner are not confined just to discomfort or unease on the patient's part. Patients are seldom deterred by any such reprimand from seeking the services of an *inyanga* or an *isangoma* when they consider that circumstances warrant this. What happens is simply that the patient does not tell the Western-trained doctor about whatever resort he or she has

made to an indigenous healer—nor even about consulting or receiving treatment from another Western-trained doctor. This means that not uncommonly the case-history of the patient is quite inaccurate, omitting quite crucial items of information, and a patient can even be taking a double and therefore perhaps harmful dose of a given medicine, by virtue of getting treatment from two different doctors without informing either of visits to the other.

Problems of communication are obviously less from the start when an African consults an indigenous healer sharing the same language and general culture; but the relationship established between practitioner and patient is very different in other significant ways from that just described. *Inyanga* and *isangoma* do not have identical approaches and techniques by any means, yet they have in common an effective view of the patient as a complete person rather than an example of a particular disorder, as well as a disposition to regard the work of other kinds of medical practitioner as complementary to their own.

Usually an *inyanga* visits the patient at his or her home, where he is told about the symptoms and can in fact observe them for himself, as he spends more than a day with the patient and his or her family. This period gives him an opportunity to determine whether he understands the particular ailment and is capable of handling it, or whether the family needs to consult a diviner who will diagnose the cause of illness. He may alternatively suggest that the patient be taken to a Western type of medical agency first, before he administers his own treatment; or he may recommend the removal of the patient from his or her existing social conditions while he gives treatment.

In short, the *inyanga* gets to know as much as possible about the patient and the patient's social situation, and thereby is in a better position to determine the illness of the whole person, physically and socially. By recommending removal of the patient from the home surroundings to the home of a relative of the patient's choice, or even to his own (the *inyanga's*) home, he may well be relieving the patient of the effects of a tension-laden atmosphere.

A diviner (*isangoma*) is consulted by the relatives of the sick person, who remains at home. She is not given the history of the illness or symptoms, as she is expected with her second sight to see beyond what ordinary people perceive and so to be able to know who is ill, what the nature of the ailment is, what has caused it, and how it should be treated. My book describes how the diviners are graded according to the techniques they employ or the methods of communicating with the spirits which give clairvoyant insight. Every diviner has the private qualification of being able to go into a trance and communicate with her spirits; if she is of a more advanced grade she can throw bones and interpret their meaning according to how they fall; while a diviner of the highest grade has ancestral spirits who speak directly to clients by whistling from the rafters of her house. She only intervenes in person when clients are unable to decipher the whistled words. (Commonly, however, the words are quite clear, as I was able to hear myself at the two sessions, by different diviners, which I attended). Diviners of this grade are quite few in number, and have gone through the lower grades. It is up to the

clients themselves to choose the method of divination they want.

Apart from their clairvoyant powers, diviners have a comprehensive knowledge of what are known as African medicines comparable to that acquired by an *inyanga*. A diviner therefore can operate at two levels—as a diviner and as an *inyanga*—and at the latter all the rules that govern the behaviour of an *inyanga* apply to her. The two roles are kept separate, and a diviner is consulted first and foremost as a diviner; it is up to the patient's people to engage her to heal the patient by using African medicines. Even when approached in this capacity, it is not unusual for a diviner to decline the role and to encourage the family to make use of their *inyanga*, perhaps with a suggestion of the type of medicine to be included in his treatment. Alternatively she may recommend another *inyanga* who is an expert on the particular disorder from which the patient is suffering.

Moreover, a diviner may advise a patient to visit a Western-type clinic or hospital, or recommend some combination of Western and indigenous treatment. Thus, the patient may be told to visit the hospital and then sacrifice to his or her ancestors who are angry at such-and-such an act of omission or commission; or perhaps to consult the diviner again or visit the regular family *inyanga* to obtain treatment for the 'African form of disease' while at the same time getting attention at the hospital for the physical ailment, e.g. by having an operation.

The point to be noticed here is that the diviner, so far from objecting to the patient going to another practitioner, even a practitioner of a very different kind, such as a Western-trained white physician, often actually recommends a combination of her services with those of others. To a certain extent the same applies to an *inyanga*, who may want the patient to see a diviner first or to visit a hospital or a Western-trained doctor first, and then return to him, the *inyanga*, for further treatment. However, an *inyanga* hardly ever refers a patient to another *inyanga*, except where the case concerns a member of his own family; here it is said that 'a doctor does not cure himself' (*inyanga ayizelaphi*).

All this of course contrasts sharply with the habitual disposition of the Western-type health agencies to look down on practically all indigenous methods of healing—not surprisingly, since the training provided in medical schools disregards the existence of African methods of cure. African patients on the other hand see these as an alternative or as providing a complementary contribution to a sensible combination of methods for curing a given trouble. In short, what struck me very forcibly when I did my research was that, whereas Western-type medical agencies embodied hostility towards African agencies, these for their part accepted the Western-type agencies of cure as additional to their own or even as providing an alternative in certain instances, as I have explained in my book [1, Chap. 2].

The *inyanga* and *isangoma*, then, are able to communicate far more easily and readily, and to establish mutual confidence, with those who seek their services, than is normally the case with the Western-trained physician and his health agency. Initial ease of communication is reinforced by methods of obtaining

case-histories which take much wider account of the relevant circumstances of a patient's life and do not discourage the patient from revealing certain opposite medical facts by expressing hostility toward alternative healing practices. Diagnosis also is much more comprehensible to the patient, as is commonly the nature of the cure.

In one further respect the Western-type and indigenous agencies differ in a manner which is favourable to the patient, namely fees. In the Western-type agencies the fees vary according to the type of treatment given, and so are unpredictable. The *inyanga* and *isangoma* however charge fixed fees, although for the latter these depend on her grade. An *inyanga* charges about £1 in the first instance to enable him to prepare his medicines, and on recovery of the patient receives a cow or its equivalent in monetary terms (about £10-25). Thus his services do not come cheap, and they are therefore sought in cases of long-standing illness and not, say, for a mere cold or a stomach upset. What matters, though, is that the family can budget for the treatment as the fees are known.

A diviner of the highest grade, with whistling ancestral spirits, charges anything from £10-20, a bone thrower about 50p-£2, and one who merely listens to her spirits and gives her clients her findings gets from 25p-£1, or a chicken. A top-grade diviner has of course qualified for that rank by going through the lower grades, and it is open to clients to choose what grade of diviner to consult, so that here again they know what to expect in terms of fees.

THE DIVINER NETWORK

I now want to consider more closely certain significant aspects of the diviner's role in Zulu society, which as mentioned in my book resembles in several ways that of a priest. To attain her status she undergoes various forms of abstinence and withdrawal from society, avoids contact with sources of pollution such as death, and passes through other experiences which likewise go to enable her to achieve contact with the sacred realm of the ancestors. She thus reaches a state of purity which she maintains by recurrent observances, and endeavours to live up to the general expectation that she will behave in a moral and upright manner. She must keep confidences, and she has heavy judiciary responsibilities in various cases of conflict, such as accusations of sorcery. It is this very figure, probably the most responsible in the traditional community, who has been and still is treated, by missionaries in the first place and hence by phys-

icians and administrators and others, as the embodiment of superstition, backwardness and ignorance among supposedly benighted people.

The particular point to which I aim to draw attention, however, is that this highly responsible status is not just left to chance but is maintained by a form of social organization serving to control and discipline them, rather as churches control and discipline priests or professional bodies perform similar functions for doctors, lawyers, etc. It is important to realize that the diviners' form of organization is not derived from Western models but is quite indigenous, with historical depth. It appears that little if anything has been written about it.

Although there is no formal association of diviners, they are kept in frequent contact with one another by meetings which all or most of them arrange from time to time. The occasion for such a meeting is slaughter and sacrifice, beyond or in addition to the frequent sacrifice of a goat which every diviner makes as a matter of course in order to maintain contact with her ancestors. Depending on her affluence, a diviner once a year, or once in every two or three years, becomes a hostess to other diviners. These guests are of four categories: neighbouring fellow-diviners, ex-students of the hostess whether from nearby or more distant areas, the diviner who trained the hostess, and neophytes who live with her and are undergoing their apprenticeship. What counts as the neighbourhood varies from diviner to diviner; in the locality where I did my research I knew well 27 diviners, but according to their proximity to her homestead some 8-10 would be invited from the vicinity of a hostess, in addition to the other categories just mentioned.

This kind of arrangement means that a whole series of meetings is held, over, say, a period of three years, at each of which there is a different set of diviners. A given diviner has the opportunity to meet the ex-students, teacher and neophyte of each of her neighbouring diviners—as well as several diviners who are neighbours of her neighbours but not of herself. As guest of each of her ex-students she meets their diviner neighbours, and the ex-students and neophytes of each ex-student; and when her former teacher is the hostess the other guests include the teacher's diviner neighbours and her other ex-students and her neophytes. This means that altogether she is part of a very widespread network and visits many different localities in the course of attending these meetings (Fig. 1).

It is quite possible for the four categories to overlap in the sense that, for example, neighbouring diviners

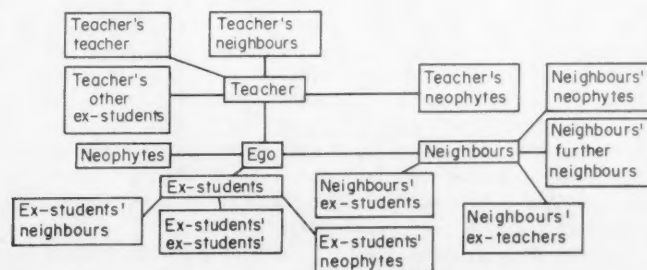


Fig. 1. Summary diagram of network for a diviner (ego).

can be ex-students of the same teacher; indeed, it would be a major research undertaking to map out the networks of even a few diviners in the same locality. Nevertheless at least a rough estimate can be made of the number of other diviners one is likely to meet over a period of, say, 3–5 years, by making some assumptions of an arbitrary but conservative nature. If every diviner has 8 diviner neighbours to whom she is hostess from time to time, and 7 of whom are also neighbours to one another; if also every diviner has 10 ex-students and 5 neophytes; then she will be in contact with over 400 fellow-diviners, perhaps all over Southern-Africa. I believe that this is no exaggeration.

Such a diviners' meeting is far from being just a social gathering. In many ways it acts as a professional conference and disciplinary or supervisory body at one and the same time. From information I was given and from my own observations at a meeting I was able to attend as a matter of special favour, I would pick out five aspects of such occasions which seem to me of particular importance. The first is the exclusiveness of the meeting, which emphasizes the solidarity and distinctiveness of diviners. Normally when there is slaughtering and feasting, among the Zulu as among other African peoples, all and sundry can join in as a matter of course; but when diviners meet and feast together, other people keep away, likewise as a matter of course, respecting the diviners' right to their exclusiveness and solidarity. As well as eating together, they sing and dance together, thereby enhancing their fellow-feeling.

Second, the meeting affords opportunities for communication of several kinds. Newly qualified diviners are welcomed in a spirit of fraternity (or, strictly speaking, sisterhood!) and news is exchanged about the particular localities from which the various guests have come, about problems posed by the occurrence of particular diseases or of diseases which are unfamiliar where they live, or by new laws which impede diviners. Innovations in dealing with specific problems are also discussed, as is any marked conflict among particular families.

Third, mutual assistance takes the form of a session where each diviner may be requested to divine for another, in line with the saying that *inyanga ayizela-phi*.

Fourth, every such meeting is conducted according to the hierarchy of grades and statuses among diviners. The hostess is never in charge of the ceremonies at her feast, for example. I was not able to study adequately the rules governing the structure of the hierarchy.

Fifth, and especially important, these meetings serve to maintain and emphasize Zulu cosmology, above all in that any diviner who is believed to be getting out of line with the basic principles is disciplined and made to conform.

I remember vividly one particular case of a diviner in the Nyuswa area who was inclined to attribute her clients' troubles to a desire by their children who had died young and had grown up in the spirit world for due recognition of their senior status, whence they caused misfortunes as a means of bringing pressure to bear on the living. This was considered (by the others) to be utterly incompatible with that part of Zulu cos-

mology which details that any one who dies unmarried remains a minor and so is associated with the ancestral group of senior spirits who died after marriage. Any such minor spirit could express discontent with the conduct of the living only through or in conjunction with the senior ancestors.

The point here is not just that the cosmology does not provide for a young deceased person growing up in the spirit world, but that to suggest that such a spirit can act independently is to imply that it can also get married—for seniority as an ancestor is achieved by those who died as married people. In the cosmology there is no allowance for the marriage of spirits. Hence the diviner who propounded this deviation was strongly reprimanded by the other diviners at the meeting in question. What they stressed was that such a serious departure from the Zulu worldview could undermine the credibility of diviners in general. She was told in no uncertain terms that she would not be recognized as part of the diviners' sorority if she continued in error.

What this means is that if there is to be a drastic shift in interpretation of the Zulu philosophy it must be done by consensus and the effect of the particular shift on other aspects or parts of the whole structure of concepts must be analysed and assessed.

This complex series of meetings, taking place all the time all over Southern Africa, thus maintains a well-structured network of diviners which not only brings each of them into contact with many others but works to familiarize each with other parts of the sub-continent, both directly by travel and indirectly by meeting fellow-diviners from elsewhere. Thereby a diviner not only becomes able to cite a precedent in a crisis or problematic situation but acquires a store of information about what is going on in many other places. Without casting any slur on the 'spiritual revelation' which diviners experience, it is not too much to say that whatever clairvoyance a diviner may possess is greatly assisted and supported by this remarkably well-organized network which keeps her up to date or continually in touch with events and human affairs pertaining to her profession.

I have laid all this emphasis on the diviner network, as a major aspect of indigenous healing practices in South Africa, for several reasons. First, the diviner's position, all things considered, is superior to that of the *inyanga*, who is not possessed by spirits and so does not enjoy clairvoyant powers. Hence the diviner, while possessing the same knowledge of medicines as the *inyanga*, may have further knowledge revealed to her while possessed.

Second, since the diviner reserves the right, after diagnosis, to advise clients to consult a particular *inyanga* and even to tell him what additional medicines to use, it is in the interest of an *inyanga* to maintain good relations with the diviners and even to refer some of his patients to a diviner from time to time, as a form of 'scratching one another's back'. More importantly, since generally people tend to consult a diviner first, she is in a much stronger position to refer her patients to a particular *inyanga* than vice-versa.

Third, whereas an *inyanga* is capable of using his medicines for malevolent purposes the diviner is regarded as a custodian of morality. She must be

pure, as this is the condition of her intercourse with the ancestors.

Fourth, as the diviners are guardians also of cosmology, the religious ideology or world-view of the Zulu, they are in a position to innovate or modulate or modify that ideology consistently with what is possible in the context of Zulu philosophy. I have discussed this to some extent in the chapter on spirit possession in my book.

Fifth, and following on the previous point, the diviners can set aside certain kinds of ailments as being only capable of cure by the diviners' remedies, as with *ndiki* possession and *igobongo* infant cure mentioned in the same chapter [1, Chap. 8].

Last, the diviners are in a superior position to that of the *izinyanga*, as I have shown at length, in having an age-old organizational network and thereby access to a much wider range of contacts and information.

CONCLUSION

I would offer an observation on all this by way of conclusion. What I have tried to describe is the traditional healing practice of the Zulu countryside, in several of its aspects. The urban situation is in a sense derivative from the rural one, in that what happens in the towns among the African population in respect of health care is hardly possible to understand without

reference to the rural traditions and customary practices. However, the big difference is that the control and discipline of diviners provided by their traditional mode of organization has scarcely any parallel in town. There, a confused and turbulent situation is prevalent, conducive to the operation of a variety of self-appointed healers, including not a few charlatans. In view of this, and in view of recent and continuing hostility toward the diviners in official and Western-oriented medical circles—which has fostered some clandestinity among the diviners and their clients—there is a need for careful and extensive research to ascertain how Africans, especially those in town, nowadays go about meeting their health needs. It would be most inadvisable to take any immediate steps to remedy the neglect and scorn of traditional medicine without first doing the utmost to obtain as precise and reliable a comprehension as possible, sensitive to major nuances, of the present state of indigenous practice and of the activities of its imitators and others who seek to profit from its continuing popularity. Otherwise, yet another disaster of development could all too easily result.

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IV (b) IDEOLOGY

HEALING AND CULTURAL TRANSFORMATION: THE TSWANA OF SOUTHERN AFRICA [1]

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Abstract—This essay calls into doubt the quest for 'theoretical closure' in the study of African systems of healing. The notion of 'theoretical closure' may be understood in two ways, one empirically derived and the other epistemological. The first is based on the assumption that 'medical systems' form a natural and discrete empirical domain, a view ultimately grounded in arbitrary or ethnocentric analytical criteria. The second sees such medical systems as parts of ahistorical and closed social systems. Both serve to render medical anthropology parochial in relation to the mainstream discipline and unable to seize the potential offered by the study of healing to illuminate important general problems, such as the articulation of thought and action, of individual experience and cultural form, and of structural order and historical process.

The study of healing in societies which have relatively recently been incorporated into world systems raises the urgent need to devise models which permit the examination of socio-cultural orders in time—how they are both reproduced and transformed. This can no longer legitimately be viewed as the 'opening' of 'closed' systems; rather, it requires understanding how the dynamic processes of particular small-scale societies engage with encompassing politico-economic forces. Healing is crucially bound up with this, for its knowledge and practice give form to key conceptions and values in all cultures, and play upon the identity of physical and social being. The context of affliction is an important locus both for the reinforcement and the reformulation of socio-cultural categories.

The case of the Tswana of Southern Africa is employed to suggest how a focus upon healing systems in time is entailed in the study of wider processes of perpetuation and change. It is the interrelationship of these processes in particular socio-cultural and temporal contexts which is the key to understanding both systems of healing and systems in general.

INTRODUCTION

In this paper I wish to consider the quest for models in the study of healing in Africa. My point of departure is the problem posed as the theme for the conference session in which this paper was first given. It was asked "whether it is possible to achieve theoretical closure in the face of the apparent openedness of the data on medical and health systems in a pluralistic framework". As phrased, this question advocates a perspective which involves a number of implicit assumptions which, I suggest, may be somewhat premature, but which are nevertheless quite widely held in certain subfields of anthropology. In fact, it would seem that prior problems demand to be raised. Is it desirable that we seek such closure, under any conditions, before its analytical implications have been thoroughly examined? Indeed, what precisely does 'theoretical closure' entail? Is it not possible that the search for it makes a more fundamental statement about the current state of African medical anthropology than it does about the nature of the phenomena we seek to study? Of course, these issues are not confined to this sub-discipline alone. As will become apparent, they are an expression of problems which run to the very heart of current theoretical debate in the social sciences.

The notion of 'theoretical closure' may be understood in at least two senses, one empirical and the other epistemological.

The first implies the existence of a clearly defined phenomenal field as the proper terrain of medical anthropology; the search for closure in this sense is the search for the substantive domain of the sub-discipline in the African context. Now, while there is no doubt that an appropriate definition of the field is a matter which concerns us all, it is becoming increasingly difficult to sustain the view that 'medical' facts constitute a 'natural' system which may defensibly be bounded and excised from their total context for purposes of exposition and explanation. One hopes that modern anthropology has superseded the 'butterfly collecting' pursuit of institutional and functional morphologies, the product of methodologies which arbitrarily subdivide whole systems [2, 3]. However, this is not the only danger to which empirically derived 'closure' exposes us. As has often been remarked of such fields as political and legal anthropology or the anthropology of marriage, rigid definitions and 'decontextualization' always involve the creation of artificial priorities in analysis and also the unwarranted imposition of chimerical Western categories [4]. In reaction to this, there has recently been a detectable revival of holism in anthropology, translating other cultures as 'total systems' of meaning. In this respect, medical anthropology has been somewhat out of step with developments in the wider field: since it has only recently achieved recognition as a formal sub-field, both understandably and justifiably it has been concerned with establishing the viability of its

scholarly domain and consolidating its ethnographic niche [5-9]. In fact, I would argue that it has reached the point where its discourse no longer needs to be parochial; rather the contrary, its subject matter, once freed from theoretical closure which is empirically defined, has important implications for mainstream anthropology. Indeed, our accumulated corpus of ethnography calls out for more general attention to be paid to the analysis of thought and ritual, to the relationship between ideology and action, and to the reconciliation of cultural form and social transformation. In short, not only is this type of closure logically indefensible, it is also self-destructive because it deflects the impact which the study of healing ought to have upon *general* theory in the social sciences.

The second sense in which 'closure' may be understood is more complex, for it reflects the epistemological proposition that systems—medical or other—may be comprehended as bounded, ahistorical forms whose totality comprises the sum of a structured set of components and their relations. This notion may be justified by appeal to empirical dichotomies between 'closed' and 'open', 'cold' or 'hot', 'static' or 'changing' societies [10], or it may be predicated upon the tacit assumption that 'structure' (synchrony) and 'history' (diachrony) are theoretically separable spheres of analysis. However, in either case, 'theoretical closure' here entails a commitment to explanation in terms of synchronic models. These may be derived from classical 'equilibrium' theory or more modern borrowings from the conceptual repertoire of structural linguistics—and both lead directly to an impasse. This is because synchronic models do not simply reduce complex data to manageable proportions, as is usually claimed in apology for them; rather, they *create* a static and unchanging 'reality' in the eye of the beholder. As Feierman [11] and Janzen [12] have pointed out, the study of medical systems in Africa strongly belies the assumption that 'pluralism' and socio-cultural proliferation are purely modern phenomena, associated with social change and the 'opening' of 'closed' systems. The impression that these small-scale systems were timeless prior to contact is more a product of the models used to describe them than it is an observation of an historically specific society [13, 14]. In this sense, too, theoretical closure may produce self-destructive falsification in the interests of explanatory clarity and empirical distortion in the place of explanation.

At the same time, however, while all societies have a history, they do not all have an equal sense of history; nor are they all caught up in processes of continual change of similar magnitude. Thus the existence of value and action in time involves *both* their perpetuation and transformation, and understanding the relationship between the two in particular contexts is a central problem, for the study of therapeutic systems, and any other. This entails, by extension, examining how processes of reproduction and change are shaped, both from within and in relationship with external forces. I stress, however, that such a program does not merely entail recognizing the now widely made plea for a synthesis of historical and structural dimensions of socio-cultural form; it requires that we specify more precisely what kind of history and what view of structure is appropriate to the enterprise [15].

In this respect, major work remains to be done. Thus far there has been some rapprochement between historians with a concern for the role of social structure in change, and anthropologists with an interest in the historicity of culture [16]. Yet attempted syntheses have demonstrated the obstinate difficulty of overcoming entrenched oppositions between synchronic and diachronic models so as to grasp the relationship between thought and action, culture and practice and internal structures and external forces. Therefore, our task in understanding the development of therapeutic phenomena over time is both extremely complex and of great theoretical relevance. For processes of healing entail the articulation of thought and action in an area seen as centrally important in all societies; namely, that concerned with the viable existence of individual members (however this is defined in specific cultural terms). In order to consider these issues further, I turn now to the nature of healing itself, and then to its significance in the context of more general cultural transformation in Africa.

SYMBOLIC HEALING AND SOCIAL VALUE

Healing everywhere concerns the human intervention in disorder: culturally specific attempts to mend the physical, conceptual and social breaches entailed in illness. Illness, in turn, is a particular expression of a universal feature of human experience, that of threat to the normal state of being, or to survival. This implies an eclipse of man's *social* being by his *natural* state, and hence frequently poses a challenge to existing order. As such, it touches upon universal paradoxes of human existence, and their symbolic expression in particular cultural schemes [17]. These paradoxes center upon the unity and, at the same time, the duality of body and mind, the ambiguity of self as subject and object, and the opposition of natural and social being. Illness calls into question specific historical resolutions of these dilemmas, and often the entire system of social relations and values which encompass the sufferer.

The physical body, as the tangible form of selfhood, is the symbolic frame through which these paradoxes of existence are most powerfully expressed [18]. For the perception of the body is culturally ordered, and everyday social action serves to reinforce or transform the mutual interdependence of physical and social being. But the body, *pace* Douglas [19], is not merely a convenient source of symbols which provides a functional image of social form. It is a scheme through which universal contradictions are shaped by historically specific values, but it also permits such values to be 'naturalized'—i.e. to achieve the status of transcendent truths, or realities which are above temporal interests [20, 21]. Physical form thus serves to represent the differentiation and arrangement of social units, shaping the individual experience of self and reality. But physical form also generates, from its own contradictions, the basis for doubt and critical awareness. Rather than simply reflect a static, straightforward correspondence of self and society, it can provide the terms for questioning established forms of knowledge and order.

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Dysfunction of the body implies disruption of the harmony between physical, social and moral being, and it sets in motion the search for reconstitution. As Fortes and others have stressed, this experience often shakes existing conceptions and may give rise to anxiety and heightened self-consciousness [22, 23]. The onset of illness frequently occasions the perception of more deep-seated contradictions in the encompassing socio-cultural order. At the very least, the healing process mobilizes potent symbolic resources; for in the attempt to redress the breaches made by illness, healers everywhere manipulate symbolic media which address a mutually entailed physical and social order. In the face of the doubt and anxiety which often accompany illness, healing processes powerfully reinforce the validity of meanings drawn from the dominant forms of knowledge in the wider culture. Healing affirms the hegemony of established images of the self and context. It touches upon deep-seated paradoxes of the human condition, addressing them through definitions of reality which imply specific interests. Explicit medical knowledge provides the rationale for this process, presenting as 'natural' what is actually a culturally constituted and socially motivated image of man [24-26]. But illness cuts across everyday accommodations and the reflex patterns of action which seem to reinforce them, and often heightens awareness of more fundamental dilemmas in the healing process and the social order it represents. Affliction may thus lead to more thoroughgoing self-consciousness and 'dis-ease' within the social system itself [27]. It follows that the context of healing affords privileged insight into the relationship between individual experience and the socio-cultural order, a relationship which lies at the heart of social transformation more generally. And the evolution of therapeutic systems themselves cannot be considered adequately without taking account of these more encompassing processes.

HEALING AND IDEOLOGY IN AFRICAN CULTURES

Let us examine these assertions and their analytical implications in the African context. Ethnographic accounts of so-called 'traditional' systems of thought and healing have been supplemented, in recent years, with descriptions of the evolution of modern therapeutic forms [11, 12, 28-31]. Notwithstanding the difficulties of reconciling data collected from different perspectives, it has thus become possible to gain insight into the historical development of therapeutic modes in several contexts. Here I draw particularly from the ethnography of the Tswana of Southern Africa, among whom I have also conducted field research; for, despite its specificity, this ethnography may serve as a paradigmatic case for examining problems in the study of therapeutic systems over time.

Available accounts of Tswana systems of thought and ritual indicate the broadly uniform evolution of indigenous cultural forms in relation to external forces in their recent history [32-36]. Although the Tswana chiefdoms display variations both in localized social arrangements and in the process of incorporation into the sub-continental political economy, in

all of them, Western bio-medical knowledge and healing techniques, and the more general semantic forms they represent, have been encompassed by indigenous cultural schemes. This has given rise to various accommodations, commonly referred to as 'pluralistic' or 'particularizing', whose internal structure and existence in time are the central concern of this paper. The experience of health and sickness and the socio-cultural universe in which they occur have undergone considerable reformulation among the Tswana. Such changes are broadly similar to other cultural transformations in Southern Africa. But they also suggest important local differences. Thus, in respect of thought and healing, the Tswana peoples may be seen as a microcosm of the problems of continuity and discontinuity encountered in much of modern Africa.

Prior to the large-scale transformation brought about by European colonial expansion, indigenous Tswana healing systems were ordered in terms of a cosmological scheme which defined the relationship between the component symbolic categories of man, spirit and nature. As is the case in most societies, it was the order of this cosmos as a totality which shaped perceptions of order and disorder, well-being and affliction. Tswana social organization and cultural forms expressed a fundamental opposition between the domains of 'civilization' and 'the wild'. Before their incorporation into the wider world system, the Tswana peoples were both agriculturalists and pastoralists, their polities in the main being organized in large centralized settlements, surrounded by roughly concentric rings of fields and cattleposts. Spatial order, ritual form and everyday activity expressed the contrast between *motse* (settlement) and *naga* (bush) and ranged along a continuum from centre to periphery. This contrasts the domain of the quintessentially social—that of male political and ritual action—with the wild, the sphere of undisciplined and amoral animal and spiritual life. Between the two was the zone of agriculture and animal husbandry, associated with the essentially female pursuits of production and reproduction and with herding, the pursuit of pre-adolescent boys. This domain was marginal to the social core in that it was separated from the sources of formal power, and that within it, human control over nature was delicate and unpredictable (see Fig. 1).

Contained within this basic symbolic opposition was a set of more specific contrasts inherent in the Tswana social order itself. As other analyses have stressed [37-41], this order is based upon a series of opposed organizational principles, primarily the pivotal contradiction between agnatic ranking (expressed in an ideology of political rank based on relative seniority in the male line) and matrilineal complementarity (a model of ego-focussed social order through lateral female links). The Tswana polities centered on the apical office of chief, and both succession to this office and the hierarchy of the entire body politic were ostensibly ordered by the rules of agnatic primogeniture, the chief being the principal heir of the senior house of the senior descent group. However, in the past, the Tswana were also polygamous; the uterine house, comprising mother and children (*ntlo*), being the irreducible unit of social organization. And ambiguity in the ranking of these houses,

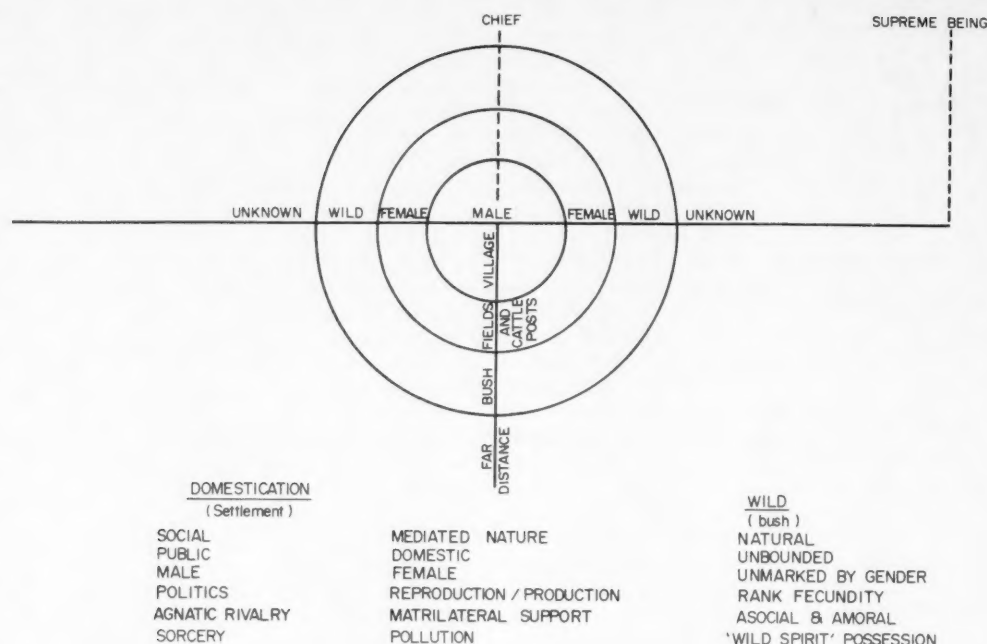


Fig. 1. The Tswana cosmos.

itself the outcome of the absence of inflexible rules for the ordering of the status of polygamous wives, opened succession within the household (and hence, the access to all formal statuses) to dispute and competition. Relations between half-brothers were rivalrous, and agnates were opposed to matrikin, who were the source of alliance and support. In fact, the preference for marriage within the agnatic group in many Tswana societies [42, 43] entails the ideal of converting male-linked rivalry into affinal support. This structural contradiction and the resolutions it spawned were expressed in the hierarchical order of Tswana social and cultural systems, ranging from the opposition of male agnates to the generalized contrast of male and female principles in social and conceptual organization, and the encompassing opposition of culture and nature. The symbolic structure of the polygamous household with its internal oppositions was subsumed into the higher order contrast between society and the wild in the overall cosmology.

It was this logic, tangibly expressed in the Tswana cosmology, that shaped perceptions of personhood, well-being and affliction, and gave form to notions of cause and modes of healing. For the fundamental cosmological categories were both opposed yet complementary, mutually threatening yet essentially interdependent. Thus the cooperation of men in government, the union of the sexes in intercourse and the contact of the social and the wild in agriculture, hunting and healing were necessary for the regeneration of the human world. Yet the disorderly mingling of these elements gave rise to illness, pollution and destruction. Each set of contrasts, from that of male agnates to that of society and nature at large corresponded to a distinct level of explicit etiology. Thus male agnatic rivalry took the form of sorcery (*boloi*—anti-social ac-

tivity among the living) and ancestral punishment (*badimo*—anti-social activity punished by the dead). Disruption of established relations between men and women gave rise to pollution (*bothitho*). And confusions of the social and natural domains unleashed the powers of undomesticated spirits (*medimo*) or the remote and ultimate supreme being (*modimo*). This hierarchy of contrasts, each opposition being subsumed by another of higher order, gave rise to a system of explanation comprising a set of principles of increasing explanatory scope [37, 44, 45] (see Fig. 2). The most common and specific cause of affliction in Tswana perception expressed the basic opposition between male agnates; it was sorcery, as practiced by particular agnatic rivals, set apart by distinct matrilineal links. The most residual and non-specific mode of explanation was the intervention in the human world of the supreme being.

Tswana ritual focussing on the physical and social body expresses the logic of these contrasts and complementarities. The key rites of male and female initiation into adulthood (*bogwera* and *bojale*) were performed by specialists and served to link the natural maturation of the physical body with the reproduction of the social and cultural order. Circumcision and general physical ordeals performed in the wild emphasized the severing of sexually mature men from a primary identity with their natal kin; it marked their emergence as adult citizens with overriding civic loyalties. In contrast, rites of female initiation centered on the controlled letting of blood within the spatial and symbolic framework of domesticity, expressing the essentially female process of channelizing natural forces for social ends. Thus contrasts within the social and political system were contained within the overriding opposition between civilization

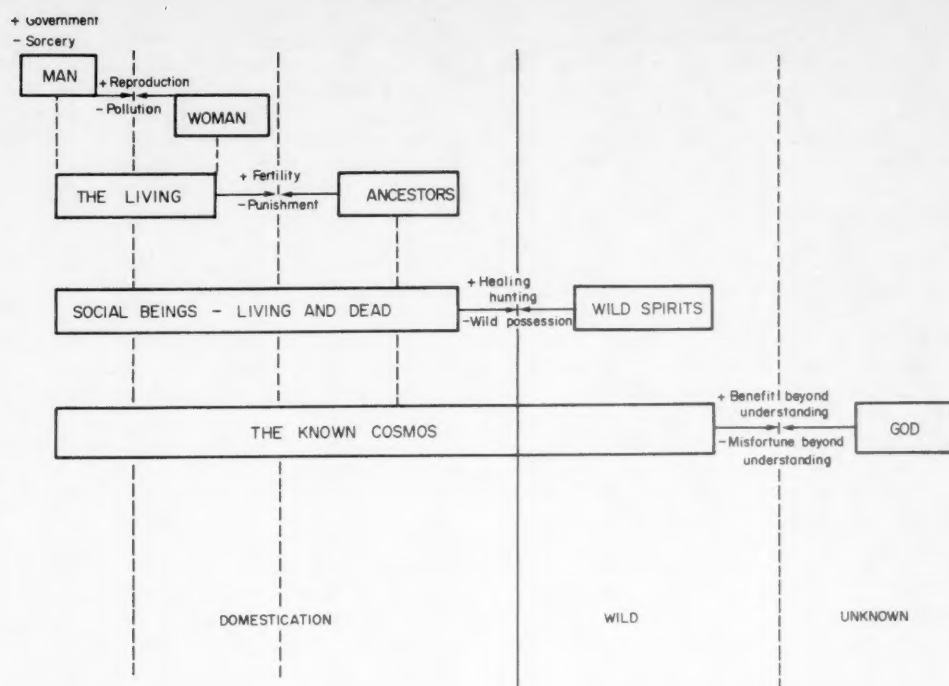


Fig. 2. Tswana etiology.

and the wild, social order and rank disorder, well-being and destruction. Moreover, annual rites of civic renewal (the 'First Fruit' rituals; *go loma thotse* [36, p. 135] gave form to the correspondence between the structure of person and polity. Ritual reinforcement of the boundaries of the community paralleled the treatment of the physical body in domestic healing rites, stressing for each the necessary but threatening interdependence with an encompassing environment over which control was limited, and contrasting the ordered articulation of person and polity with the relative chaos beyond.

Illness, in these societies, was perceived as an expression of social conflict or cosmic disorder, revealed in disruptions in the normal relations of men, spirit and nature. The perception of affliction signalled the confounding of the distinct elements whose separate existence gave form to the known world and whose careful joining underlay creativity—i.e. self-other; male-female; social-wild. As I have suggested, the experience of illness centered upon a specific-set of conflicts of relations and values, themselves expressions of more fundamental contradictions in the socio-cultural order. The classic ethnographic accounts of cosmology, divination and rites of affliction in Africa stress how interpretations of illness and misfortune reveal structurally defined 'imbalances', 'social strains' and ambiguities of value. I have noted the central role of agnatic sorcery in the Tswana perception of illness. But significant, also, are breaches in the norms which describe established forms of relationship between old and young, royal and commoner, and the dominant and subordinate in general. As in all societies, etiology serves to unite the established forms of social order with the symbolic categories of health. And cos-

mology provides a set of accessible codes which permit dislocated personal experience to be discussed in the language of social conflict and cultural confusion.

As this description indicates, the Tswana perceived and classified disorder or misfortune primarily in terms of its causes. Hence, while they had a vocabulary of terms which described various physical and psychological disruptions, these did not form the logical basis for their taxonomy of illness [37]. In fact, no fixed relationship existed between specific causes and symptoms; and explanatory principles, such as 'sorcery', could be applied to what appear to the observer to be a variety of physical signs, just as seemingly similar signs were attributable to a range of potential causes. Indeed, our own logical distinction between 'cause' and 'symptom' is not reflected in Tswana epistemology, where symptoms were perceived as the tangible dimension of causes and were given meaning by the dominant metaphor of causality. Hence, a physical wound was both a painful lesion and sorcery—both symptoms and cause being components of an adequate description of the overall phenomenon, and both being expressions of disrupted relations of sufferer to context. The manifestations of such disruption were also not limited to signs or sensations of the individual body or mind. Skin eruptions, pain, dreams, perceptions of personal failure or sickness of one's cattle might alike have served as expressions of a single state or condition. And while there was a term for psycho-physical disruption within the person—*lwala*, which I gloss as 'illness'—this is merely an index of a more embracing state of *bothhoko*, or 'affliction' [37].

The mobilization of healing processes depended upon the perception of the meaning and magnitude of

disruption entailed in unusual symptoms. A distinction was made between threatening and trivial affliction. In the first case, the activity of purposive, personalized agents (either human or spiritual) was discerned; in the second, it was not. Here, the meaning of symptoms was not read merely on the basis of their disabling, disfiguring or painful effects; they were evaluated in the more inclusive social context of the sufferer. For they derived significance from his perception, and that of others close to him, of the state of his relationship with the human, spiritual and natural environment. There was no 'objective' meaning which could be read into the tangible signs of affliction if these were detached from the perceptions of the victim, and of those in his immediate social context with whom he existed in a mutually interdependent state of being. Once the possibility of threatening disorder was perceived, recourse was made to a specialist—a *ngaka*, or doctor—who divined meaning and mobilized cure. But the doctor did not define the nature and status of the affliction by evaluating selected 'facts' with reference to the external criteria of special knowledge. Rather, he tried to assist the sufferer to externalize the features of his distress—to recognize their implicit meaning within the terms of a shared cosmology.

In many of the classical anthropological works, the logic of the healing process is seen to lie in the manipulation of a flexible but essentially unchanging cosmology and ritual to redress inherent socio-cultural conflict, thereby regenerating persisting values and social relations. But it is here, in particular, where the conceptual terms of synchronic analysis impose unwarranted closure. As I have stressed, the onset of illness everywhere heightens self-consciousness and calls for coordinated interpretations and action. In illness, the relationship between personal experience and culturally specified definitions of reality are re-examined, and their terms either confirmed, subtly re-arranged, or even reformulated. Accounts of divination in African societies show how it provides the means whereby shared cosmological systems are related to particular incidents of affliction [46-48]. The open-ended metaphorical conversation which is African divination allows healers and clients to exchange interpretations of misfortune and thus subsume chaotic experience into existing symbolic categories with a degree of consensus. But, and this is a vital point to remember, the order and scope of reference of those categories may also be imperceptibly altered in the process.

Divination among the Tswana often seems to have occasioned quite searching analysis of social contradiction. While it may not be self-conscious, continual reformulation of collective meanings occurs in this context, stemming immediately from discrepancies between personal experience and shared ideology. These discrepancies themselves are the result of continuous shifts within the social system, motivated by its inherent contradictions, and by their relationship to the ecological and external environment. Healing is one of a series of contexts of action in which cosmological categories may be reordered, symbols given renewed value, established patterns of meaning reordered or extended, and innovations incorporated. The sets of dice used by modern Tswana diviners provide

graphic illustration of this process. The basic set of four 'bones' (representing Senior Male, Junior Male, Senior Female and Junior Female respectively) permits 16 primary configurations or 'lies' (*mawa*) based on sex and age. This set has been considerably enlarged, reflecting changing perceptions of the universe of meaning and of causality. Modern divination sets now tend to include a range of other signifiers—for example, bones representing 'non-Tswana blacks' (*batoša*), whites (*makgoa*) and God (*modimo*), and they generate an expanding array of diagnostic configurations.

In the period immediately before the large-scale effects of domination became perceptible, Tswana culture appears to have undergone very gradual shifts of content which did not entail the objectification and transformation of its basic structures. Available evidence suggests a continuous process of realignment which did not fundamentally alter the broad configuration of categories in the symbolic order outlined above. Yet within these parameters quite considerable reordering seems to have occurred, most noticeably in the sphere of public and private ritual intervention in serious disorder or misfortune. For example, Tswana ritual experts travelled widely over the sub-continent, incorporating practices and sometimes interpretations to extend their own [36]. Further, the mobility of indigenous Southern African peoples during the early nineteenth century, in the wake of the progressive displacement occasioned by the rise of the Zulu kingdom, led to substantial contact and some cultural exchange. Such eclecticism, however, occurred between groups similar to the Tswana in social and political organization, and modes of production. Most significant for our present purposes was the fact that, in these societies, indigenous cultural categories shaped everyday experience in a manner very different from that of Western societies. The Tswana peoples and their indigenous Southern African neighbors shared cultural schemes which did not make sharp distinctions between body and mind, subject and object, knowledge and experience, fact and value in the same manner as in Western epistemology [24]. This means that healing was widely perceived as the mediation of discontinuities between self and context—in marked contrast to the logic of modern biomedical practice. In short, Southern African peoples differed radically from the colonizing societies in socio-cultural organization; and in relation to these societies, more fundamental change was to take place.

HEALING, DOMINATION AND CULTURAL TRANSFORMATION

Interpretation of any modern system of thought and healing requires that we examine the dialectical process whereby its inherent social and cultural forms engage with processes of incorporation into the world political economy and its attendant orders of value. I must stress that, as in much of Africa [45], indigenous Tswana healing processes entailed a degree of internal overlap and incoherence in respect both of its techniques and conceptual terms. In the absence of an elaborate mythology, cosmology was expressed largely in a discourse about cause and event—espe-

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cially in respect of the etiology of misfortune. Cosmology had little overt existence outside the pragmatic context of therapy. [23, 24]. It was here that the relationship between knowledge and action was consciously managed. But the metaphors of causality were not made explicit as a coherent 'belief system', a feature highlighted by the widespread modern Tswana use of the term *modumedi* ('one who professes belief') to translate 'Christian'. I have suggested elsewhere that this widespread feature of African thought and healing is the manifest realization of a socio-cultural logic which shapes everyday experience [37]. But the process whereby it shapes, and is shaped by social action remained largely implicit until the radical transformation of the indigenous systems from the colonial period onward. This brought about a progressively heightened awareness of cultural identity, of the role of 'belief' and of contradictions both within and between discrete social systems. These processes, as we shall see, are writ large in the character of modern therapy.

The incorporation of the Tswana peoples into the wider world system was accompanied by the operation among them of several European mission institutions, a few of which had an explicit medical emphasis [49]. These agents enthusiastically, and often unwittingly, confronted the Tswana with the general scheme of knowledge associated with the industrialized capitalist societies from which they came—an ideology which, although phrased in theological terms, emphasized cultural categories in accord with the bio-medical conception of man, illness and healing, which was developing at that time. These general cultural categories entail a specific view of knowledge, and a construction of reality very different from that of the Tswana [24]. Fundamental to this difference were distinct conceptions of the relationship between physical and social being, the cause and meaning of affliction and the logic of healing. Particularly significant for our concerns here, Western cultural categories separate 'religion' from 'healing', thereby violating the essential Tswana identification of religion with the practical ordering of social, spiritual and natural relations, and threatening healing as the primary context in which this integrity is achieved. Moreover, the world-view to which they refer makes a number of other dichotomies which are absent in most African cultures: the radical distinction between self and other, person and context, and mind and body, which underlie the biological individualism upon which Western medicine is predicated [24]. In sum, given its foundation in a cosmology which envisages the world as being founded upon *material* rather than *social* relations, and the predicament of the person as depending upon his own initiative rather than his location in a total social environment, this symbolic scheme embodies a series of assumptions which contradict the axioms of Tswana culture.

Despite the fact that mission theology was bound up with an integrated industrial-capitalist ideology, and as such stood potentially as a direct threat to Tswana culture, its initial impact here, as elsewhere, was mediated by internal structures of thought and action. Thus the strongly centralized Tswana political and residential organization meant that mission ac-

tivities were at first tied to the chiefship (and often directly served its interests) [33, 50]. Evangelists who sought to resist this, especially in the nineteenth century, frequently found it impossible to continue their work. Lack of geographically dispersed stations—as existed among the Nguni communities, whose spatial organization necessitated it—militated against the growth of a sharp native distinction between adherence to 'traditional' or Christian ideology and practice (as developed among the Xhosa, for example) [36, p. 360; 51]. In addition, the Tswana tended to reformulate their cultural order gradually, and incorporated concepts and techniques from outside (a common characteristic of non-literate societies more generally; [10]). This encouraged the accommodation of Christian elements *within* the existing cosmological order, rather than their perception as an all-or-none alternative to it. Hence, even by modern African standards, Tswana thought and ritual has often been described as 'syncretistic', and their Christianity as 'nominal' [33, 34]. In the period which followed early mission contact, the Christian idiom, and its implicit classification of the world, slowly began to be incorporated, causing subtle shifts in the meaning of certain concepts and reordering of the relation between such concepts in the indigenous cultural scheme. But the inadequacy of Western categories in comprehending Tswana experience and the social and cultural forms which shaped it, ensured that the mission church (and allopathic medicine) would remain limited in relevance to any but those who repudiated that context in its entirety. This, as we shall see, partly explains the spectacular success, especially in South Africa, of a range of ecstatic healing movements whose symbolic and ritual forms bridge certain of the discontinuities between Western and indigenous cultural principles. These sects (widely referred to in Southern Africa as 'Zionist' churches), originated in North American secession from orthodox Protestant denominations on the part of those alienated from their values, rewards and implicit world-view. They seek to re-integrate precisely those categories increasingly set apart in orthodox Christianity: man and spirit, body and mind, self and social context and worship and healing.

In spite of the lack of appeal of mission Christianity as a total cultural order, the progressive transformation of Tswana economy and society, especially during the twentieth century, has occasioned important shifts in cultural classification and manifest ideology. In so doing, it has generated a number of contradictions in the everyday experience of those involved. But the manner in which this has occurred has not been uniform within the Tswana world, although there are shared features. In this respect, it is instructive to distinguish between those communities situated in South Africa and those in Botswana, for while in the nineteenth century they shared broadly uniform structures, distinct processes of incorporation within the sub-continental political economy have lead to increasing differentiation. While it is obviously true that the economies of these states are closely interdependent, and are alike drawn into the world capitalist system, there have nevertheless been significant contrasts in the ways in which this has impinged upon Tswana at the periphery [52]. This serves as a remin-

der of the importance of such localized distinctions in African history.

In Botswana, the recent emergence of an independent administration with explicit Western capitalist leanings has led to the extension of economic aid programmes to the rural areas, where peasant-capitalist agrarian communities and clear class divisions have begun to develop, involving the interaction between internal structures and external forces [52]. In South Africa, the Tswana, like other indigenous peoples, have been involved in a more complex political and economic history, which has entailed their widespread absorption into the labour market, the thoroughgoing proletarianization of the population, and the progressive underdevelopment of their agricultural base. Through close central control, the rural 'homelands' have become largely unproductive labour reserves to an even greater extent than is the case today in Botswana [53]. There has also been limited encouragement of a black bourgeoisie in such areas, the members of which are tied either to government bureaucracy and/or state-aided free enterprise. These politico-economic distinctions are central to the evolution of overt ideologies and implicit symbolic classifications, particularly with respect to so-called 'plural' healing systems, because it is frequently in the context of affliction and crisis that the values associated with these emerging divisions take conscious form.

In both contexts, entry into the industrial-capitalist economy and the concomitant emergence of class has produced a series of common socio-cultural transformations. Thus, for example, class divisions are beginning to subsume indigenous oppositions between agnation and matrilinearity, seniority and juniority, and male and female; and, in the agrarian context, changes in relations of production have affected domestic relationships, kin ties and the values associated with marriage [54]. Moreover, the historical epicentre of the political and social domain, the chiefship, has been eclipsed by the distant but potent central government [55]. Similarly, former collective ritual has been supplanted by the worship of God in the church; the supreme being has been more explicitly assimilated into indigenous perceptions of the world than before [45], although he remains remote, except in the more accessible form of the 'Holy Spirit' in Zionist healing rites. At the same time, the fundamental categories of Tswana culture remain intact in an important sense, for they retain a continuing opposition between Tswana and non-Tswana—and, *a fortiori*, between the local community and the chaos (if no longer the 'wild') beyond it. This implies a cosmos in which human beings, spirit and nature remain united and, consequently, indigenous theories of cause and effect persist. The symbols of the body and of healing rites in general still condense references which speak to the complex balance between the person and his whole environment, material and intangible. Illness and misfortune continue to be conceived as metaphors for man's dislocation within that social and natural environment. In short, the symbolic realm of *setswana* and the assumptions about the world which it expresses, are sustained, although in continuous interaction with external influences. Hence, despite gradual reformulations within the cosmology wrought by the demands of everyday experi-

ence, Tswana epistemology remains very different from mainstream Western culture—a difference reflected especially clearly in the contrasting way in which reality is perceived and represented.

I stress, however, that the integrity of Tswana categories of knowledge refers to an ideological order; and this involves a different level of analysis to that concerned with the experience of the individual person in situations of rapid transformation. My focus is on the logic of cultural process in the first instance (although, as I have suggested, I see the problem of the essential interconnection of these two levels as important). It follows from the nature of the differences between Tswana culture and mainstream Western knowledge that the former simply could not embrace the latter without losing its characteristic form; for the two are, finally, mutually contradictory, as are the social and economic orders of which each is a part. So, to say that Tswana ideology retains its integrity is to note little more than that it continues to exist in an identifiable sense. But, precisely because Western culture, both in the guise of Christianity and as the dominant symbolic structure inherent in the sub-continental political economy, is itself a total system, its very presence implies an inescapable paradox for individual Tswana. For, ultimately, it is an undeniable alternative to *setswana*—and their incorporation within the world system has inevitably brought this increasingly before their eyes. For while syncretisms of apparently complementary Western and indigenous cultural forms have occurred in Tswana societies (especially in respect of cosmology and healing) the implacable logic of their incorporation in the political economy of Southern Africa has ensured that such accommodations are partial and unstable. Indeed, recent historical events have led to a heightened awareness of Tswana cultural identity, and of the contradictions between systems, alluded to earlier in this section.

At the level of individual consciousness, then, the coexistence of two inimical cultural orders has produced essentially three perceived solutions, although, as we shall see, recourse to them seems less a matter of individual volition than of social situation. The first solution is to reject *setswana* entirely, and to seek identity in Western cultural terms; the second is to assert the primacy of *setswana* and adopt Western techniques and concepts only where they have mundane usefulness. The third is to pursue an assimilation of the two ideologies. Again, I emphasize that these are emerging among Tswana as *perceived* alternatives; none of them in fact resolves the contradictions inherent in the modern predicament, for they are all caught up in the dialectic between Tswana culture and social relations and the wider world beyond them. But each has implications for modern patterns of thought and therapy; the range of options available—those of Western allopathic medicine, of *setswana* healing, and of Zionist rites respectively—are the 'medical' corollaries of the three ideological alternatives.

Predictability, it is members of the emergent Tswana bourgeoisie who tend to espouse most consistently the value of allopathic medicine in and of itself. This often accompanies professions of being a 'true believing' Christian and an explicit commitment

to a Western, rational democratic world-view. It is also reflected in a construction of reality which distinguishes body and mind, self and other, material and social relations; in other words, which expresses the fundamental tenets of Western biological individualism. This is not to say that in practice middle-class Tswana do not make recourse to indigenous therapy, although some are less than willing to admit spontaneously to doing so; they, too, are caught up in the experiential predicament of a plural world. But, in ideological terms, they display the greatest explicit adherence to the cultural forms of Western capitalism. It could hardly be otherwise: in so far as ideology articulates with practice, their location in the existing political economy demands the concomitant existence of cultural forms through which to make sense of their relationship to this context. Nonetheless, as long as they remain in the Tswana universe, and must interact meaningfully within it, they are necessarily entrapped in the symbolic forms which circumscribe it. Consequently, the experiential contradiction of their predicament is perpetuated: they are inevitably compelled to 'choose' adherence to Western bourgeois ideology [51, p. 30; 56], but are simultaneously a part of the social and cultural domain of *setswana*; and, equally predictably, they tend to cope with misfortune by seeking therapy in both allopathic medicine and indigenous healing, despite their ostensible commitment to the former.

The second perceived alternative, the primary assertion of *setswana* along with the instrumental adoption of Western technique, is widely invoked by modern rural Tswana. For the majority, the *ngaka* remains the relevant diagnostician in the event of affliction, and cause and effect are still perceived largely in terms of interpersonal and spiritual relations [51, p. 20; 56, p. 30]. Consistent with my earlier comments, indigenous therapeutic models reflect the incorporation of a reformulated world-view—in particular, a notion of sorcery as operating amidst the new social tensions associated with economic and sexual rivalry. Illness is also frequently perceived as expressing conflict between individualistic self-interest and kin loyalties, a perception that reflects the manner in which changing modes of relationship are ordered in the healing context, altering the scope of reference of persisting symbols such as the 'sorcerer'. Parallel to this, many Tswana will also appeal to Western allopathic doctors. The latter might be seen as not comprehending the logic (the 'why') of affliction; but they are recognized to offer some diagnostic insight and palliative treatment to limit symptoms, which is increasingly valued for itself. Under these conditions, divination is resorted to for explanation, especially for more stubborn misfortune.

However, there are limits to the extent to which the range of symbols and techniques of *setswana* healing can be extended to cover the changing perceptions of affliction attendant upon fundamental social transformation. It is here that the Zionist sects have carved their particular niche as the third alternative. In seeking to assimilate indigenous symbolic forms with those of Christianity, they have in fact accommodated the latter to the former; as I have noted, a true synthesis of ideologies is not possible. Thus, for example, the ambiguous figure of Christ, widely perceived as

the ancestor of the white ruling class, is replaced by the morally concerned, partisan ancestral spirits. But these sects do mediate between the symbols of local identity and elements of an alien theology with its inherent categories of knowledge; and, in so doing, they reintegrate religion and healing in a recognizable cultural scheme. The charismatic Zionist leaders typically assume the symbolic status of elder kinsmen, intervening with the realm of the spirits in search of cure for the members of their face-to-face congregations. They act as guardians of the explicit codes of conduct which regulate the everyday lives of members of these sects and which describe the proper relationship of man to his fellows and his natural environment. For adherents, these codes provide the explicit moral bases for the pursuit of health and well-being.

Thus, not only do the sects provide a bounded context for individuals whose domestic groups have been splintered by the migrant labour system [36, p. 232]; they also permit subtle shifts of meaning and value. Thus the links between the living and the dead, formerly expressed in collective kin rites and symbols, are now individuated within the framework of the Zionist 'congregation' (*kereke*, literally 'church'). Such shifts express more general epistemological changes, such as the gradual individuation of personal identity. Yet the symbols entailed in Zionist ritual and dogma contain an image of man which continues to stress the dynamic interdependence of physical and spiritual being, of persona and spirit, of living and dead and of sensation and intellect. In short, the encapsulated Zionist world forms a conception of person, cause and event which remains very different from that of orthodox Western Christianity, or of rational materialism.

The Zionist idioms derived from Western faith healing and Pentecostalism have been easily conflated with the symbolic categories of native thought and practice, and have provided significant images (such as that of spirit healing) which give form to changing experience. Yet the ideology and ritual of these sects cannot provide a total alternative for most Tswana, for their categories cannot contain the more fundamental contradictions in the relationship to the wider world system, and the everyday experience which this generates. In fact, the discontinuities between the symbolic order entailed in Zionism and that of mainstream Western industrial society are marked. They are expressed in the encapsulated, holistic organization of Zionist thought and action, which explicitly provides an alternative to the established Western world-view; and, also, in the middle-class perception that Zionists inhabit a distinct universe which is irrational, inferior and stigmatizing (a view commonly held of ecstatic fundamentalists in our own mainstream culture) [51, p. 113; 56, p. 109].

To summarize, all three alternatives are limited as total ideologies. But each of them offers potential recourse in the wake of affliction. In South Africa, many individuals tend to participate in all three therapeutic foci simultaneously, placing little emphasis upon the margins and relations between them as discrete fields. They use allopathic medicine for relief of disabling physical symptoms, indigenous healing for signs of interpersonal conflict, and Zionist healing for what appears to be spiritual intrusion. This creative syncretism has frequently been

remarked upon in the literature on modern African thought and healing more generally [12:56, p. 150]: indeed, we seem to be in the grip of a *new* synchronic orthodoxy in this field, that of 'syncretistic equilibrium', which argues for the stability and functional integration of so-called plural cultural systems as total repertoires of widespread applicability. However, as the Tswana case underlines, perhaps more urgently than most, what we choose to call syncretisms in particular times and places are merely instances of the continuous and interdependent process of both persistence and change.

Accordingly, the Tswana ideological modes as I have described them are themselves being reformed in the light of the changing position of these peoples in their social context, and the effects of this upon their changing constructions of reality. In this respect, it follows from what I have said that two distinct tendencies are emerging in response to the structural and ideological contradictions of the Tswana predicament. One is a growing identity with Western cultural forms (perceived as a discrete system) and an optimism about the possibilities of mastering them in the attempt to control everyday experience and ameliorate present social circumstances. This is predominantly a bourgeois solution. The second is more manifestly syncretic, although not self-consciously so; and it is to be seen in participation both in *setswana* healing rites and in the sects. Each of these focuses upon afflictions of different (but, for many, culturally complementary) etiology, and hence together they have developed a common division of symbolic and therapeutic labour. Here more immediate resolutions of perceived conflicts and afflictions are sought, in terms which unite certain Western symbolic and technical elements with a notion of person and context different from that of Western epistemology. This is predominantly the solution of those who have not experienced significant symbolic and practical control over Western productive processes—i.e. a predominantly proletarian solution [57, 58]. But the evolving process of incorporation into the world system, which implies constant shifts in the Tswana relationship both to rural periphery and urban centre, means that these ideologies themselves are in a state of flux, and that individuals move between them. I suggest, however, that this developing ideology among the Tswana expresses a more fundamental cultural proliferation entailing differences of class. For differences in the structural location of individuals and groups in the wider political and economic system have increasingly replaced indigenous social contrasts in shaping distinct experiences of reality. Such class distinctions come to index varying perceptions of the relationship between internal and external cultural categories, and of viable forms of mediation between them, such as are represented in etiological beliefs and therapeutic practices. This situation is mirrored in many other African contexts in the proliferation of religious ideologies and healing movements [51, 57–59]. In Botswana, for example, there has been a greater polarization than in South Africa between 'traditional' (*setswana*) and Western therapeutic practices, and also a greater class proliferation. Zionist churches have had more limited impact, predictably most widespread among the urban working class. While much of the

population makes use of indigenous and allopathic medicine in complementary fashion, the two forms exist in a particularly acute tension among middle-class individuals.

Thus, when we examine the range of modern Tswana healing practice, we see a series of identifiable ideological resolutions reached in the context of everyday experience of affliction and gradually shaped over time. These express the dialectic between internal systems of meaning and action and external politico-economic influences.

CONCLUSION

In pursuing the Tswana case as a particular but representative example, I have tried to address a series of related analytical concerns, stemming from my introductory remarks about the danger of unwarranted theoretical 'closure'. In suggesting that the study of contemporary therapeutic forms must be part and parcel of the wider quest to understand processes of cultural transformation, I have tried to transcend Procrustean oppositions between structure and history, synchrony and diachrony, and to avoid models which depict essentially changing social phenomena as static and bounded. By implication, I have also argued against those approaches which posit universal dichotomies—'traditional'–'modern', 'open'–'closed' and so on—and which describe change as an inevitable evolutionary movement between these respective poles, rather than treating this process of transformation itself as problematic. The application of such polarizing models to African thought and healing seriously distorts not only the conception of their existence in time, but the notion of process in general, and the nature of thought and healing in all societies, including our own. In this sense, *pace* Horton [44], neither African traditional thought nor Western science are either 'open' or 'closed': explanatory modes, whatever else they might be, are the product of a continuous dialectic between latent social and cultural structures and manifest thought and experience. Knowledge and healing everywhere are contained in symbolic forms which encode values and interests, and which are always to a large extent inarticulate. So to understand historically specific forms of therapy always requires that we examine their latent structures, in our own system of healing as any other, as the increasing debate over the ideological role of Western medicine and bio-medical science indicates. In fact, without some insight as to how our healing processes inscribe in the body the epistemological categories of our culture, we can understand little of its success and failure in modern African societies—why, for example, in many such contexts it has been Western faith-healing rather than bio-medicine which has made sense of the experience of affliction. For what is at stake here is not the advance of scientific, value-free medicine (whose basic empirical credentials have taken much criticism in recent years). It is, rather, how the values and worldview it represents, those of biological individualism and asocial material reality, come to have a hold on the hearts and minds of men and women in sickness.

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THE CREATION OF MEDICAL KNOWLEDGE: SOME PROBLEMS IN INTERPRETATION

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Abstract—The anthropologist's discourse on medicine depends on a satisfactory understanding of medical knowledge. This means recognizing that:

- (a) an actor does not know all of his medical facts in the same way;
- (b) his medical knowledge is recursive; and
- (c) this knowledge needs to be viewed in terms of the processes by which it is produced rather than in terms of its structure.

When processual and structural views of medical knowledge are compared, the latter are found to either bracket out important emotional and ideological determinants, or to trivialize them. Scientific processes for producing medical knowledge can be distinguished from non-scientific ones. But in both cases medical facts are socially constructed. This view of medical science is at odds with empiricist versions. The latter ignore the social determinants of scientific knowledge and, as a consequence of this position, legitimize a technology-centered and theory-centered view of non-Western medicine.

INTRODUCTION

Most health seeking behavior is rationally determined, at least in the non-utilitarian and undemanding sense in which anthropologists usually write about rationality. According to these standards, an actor's behavior is rational if it can be shown that his beliefs about what his behavior can do are more or less consistent with what it does, as he observes the results. I say 'more or less' since this broad definition includes instances in which an actor cannot specify the circumstances under which his behavior can be expected to make a difference, he seems to ignore strong evidence that his behavior is ineffective, he simultaneously pursues courses of action that are underwritten by contradictory sets of beliefs, and his behavior is influenced by strong emotional forces.

This point about rationality is important because it underwrites the anthropologist's interests in the practical meaning of people's medical beliefs. It constitutes his grounds for explaining *why* people behave as they do, and determining *how* their practices are efficacious. It is also a point of departure from earlier attempts to explain medical practices in terms of their ameliorative social functions and unintended psychological consequences: e.g. where Ndembu medical action was described as ritual behavior mediating socially divisive and ontologically threatening conflicts between the egoistic and collective values that are intrinsic to Ndembu social organization [1].

The fly in the medical anthropologist's ointment is that the kinds of information that he needs for his interests are not always the facts he actually collects. There are some obvious reasons for this. Sometimes an informant is not fully aware of the various intentions that led him to choose a particular act, or he cannot verbalize how he evaluated the results of his act, or he lacks the insight needed to identify the emotional component of his decision or the relative importance of his different intentions and expectations. Sometimes, too, he simply does not tell the truth, or at least all that he knows of it.

I want to begin this paper by calling attention to a less obvious reason. It concerns an epistemological issue, and leads us to ask whether an informant's statements might be deceptive because we have interpreted them as elements of cognitive structures rather than in terms of processes of knowledge production. My argument is summarized in the following propositions.

First, an actor's medical knowledge (beliefs) and his statements are not epistemologically homogeneous. That is, he does not know all of his facts in the same way. This is accounted for by the fact that his knowledge is recursive and processual, in the sense that he continually evaluates it against his intentions, expectations, and perceptions of events, and sometimes he compares it with other bits of his knowledge of similar events.

Within the conventions of ethnomedical writing, there is a tendency to reduce questions about the *processes* by which informants and researchers produce their knowledge to questions about the *structure* of knowledge. Even when questions about the production of knowledge are considered, they tend to focus on the role played by cognitive structures. Other factors producing knowledge, such as social relations between healers or between healers and their clients, tend to be excluded. Even when epistemological differences are acknowledged, it is only to set off ritual or symbolic meanings from everyday or practical meanings, thus ignoring the heterogeneity of the latter. Later in the paper, I shall make the point that these same structuralist tendencies also explain why anthropologists have generally ignored questions about the relation between knowledge and ideology.

Second, although there are many ways in which one might want to divide up how a person knows his facts, a social scientist should be prepared to recognize at least the following five:

- (a) There is the actor's theoretical knowledge, with which he organizes his own and other people's reports about objects and events. Theoretical knowledge in-

cludes an actor's interpretive schemes (e.g. homuncular theories of human reproduction) and principled explanations (e.g. theories linking the onset of sickness to moral delicts). These instances are usually employed in explicit ways, but there are other kinds of theoretical knowledge which are embedded in practices and beliefs which, on the surface, seem unconnected with the objects and events they organize. These tacit forms include analogies (e.g. Amhara peasants hierarchize body organs through analogy with the organization of the traditional Ethiopian state) and systems of classification which are implicit in language.

(b) There are the actor's empirical observations of particular objects and events and his impressions of the observations that other people report to him. This is always theorized knowledge.

(c) There is his rationalized knowledge, in which he constitutes objects and events in a way that makes them existentially coherent with the other objects and events that he imputes to the material world. For example, the concept of theodicy, introduced into the social sciences by Max Weber, refers to bodies of theoretical knowledge that are intended to produce psychologically satisfying forms of rationalized knowledge about disturbing, recurrent events.

(d) There is the actor's intersubjective knowledge, in which he constitutes objects and events in ways which he believes will make them intelligible to other actors with whom he interacts.

(e) Finally, there is knowledge which the actor produces by negotiating meanings in interaction with other actors. Very often, the medical knowledge that is produced in diagnostic sessions is negotiated. It is produced, for instance, when a client (or proxy) wants to control expressions of symptomatic behavior and descriptions of etiologic events in order to avoid unwanted diagnoses. At the same time, he depends on the diagnostician's expert knowledge for a cure and a definitive label for his condition [2-4].

There is no *a priori* reason to claim that one kind of knowledge is more authentic or autonomous than the other forms. Each kind is connected to particular intentions and particular acts—e.g. pursuing clinical goals, reducing psychological conflicts, making meanings intelligible to other people—and each is measured against its effects. A client finds his negotiated diagnosis no less factual because he exaggerated his complaints in order to impress the clinician with the seriousness of his case, for example. Each, too, is dialectically related to the others. An actor's negotiated knowledge is partly determined by his theoretical knowledge of classes of events, but there are also occasions when negotiated knowledge can change the content of his theoretical knowledge. To the degree that an actor uses his negotiated diagnosis to organize other bits of knowledge, constructing classes of objects and events out of unique instances ("the classic case of—"), it becomes theoretical knowledge. Finally, some kinds of knowledge can only be produced from other forms: an actor's negotiated knowledge is the product of his empirical knowledge, both are forms of theorized knowledge.

This means that an actor produces more than one kind of knowledge about a particular event. His

knowledge then appears to be contradictory to us only if we make the mistake of separating beliefs from praxis, substituting structure for process.

Third, knowledge that determines medical behavior is constituted from a flow of intentions, observations, and expectations; it is continually re-forming as the actor monitors his own behavior and its effects [5]. Thus, knowledge is not equivalent to disembodied sets or systems of ideas. It is 'carried' in people's minds, but it is also incorporated—in the form of tacit, taken-for-granted theoretical knowledge—into the equipment, techniques, and social relations which, coincidental with their intended uses, *materialize* ideas into the world of objects and events [6]. At the same time that these factors are materializing ideas in the forms of symptoms, remissions, etc. they are also helping to *determine the specificity* of these ideas. That is to say, they help determine that some kinds of empirical observations are *unlikely* to be produced, because:

(a) the tacit knowledge that is embodied in equipment, techniques and social relations make it unnecessary or difficult for actors to ask questions which might lead to these observations; and

(b) these factors are themselves incapable of materializing the observations [3].

For instance, in medical systems where diagnosticians can materialize only etiological facts, i.e. relating to facts outside the body, an elaborate symptomatology would be literally meaningless.

In the next section I shall refer back to this point in connection with secrecy and literacy.

THE DISTINCTIVENESS OF SCIENTIFIC KNOWLEDGE

It is obvious that a processual view of knowledge is not equivalent to a developmental or cumulative view of the sort generally associated with scientific inquiry. Scientific systems are predicted on the principles that all empirical observations that *can* be connected through theory ultimately *should* be connected in (experimental) practice, and preference should be given to developing the varieties of theoretical knowledge that can make the most connections.

It is typical of non-scientific systems that they insist on neither condition. Here, theoretical knowledge has a low degree of autonomy and it is not itself a locus of attention outside of practice. Observations tend to be invoked according to the practical and contingent needs of the actors. Indeed, non-scientific systems sometimes incorporate procedures that are valued precisely because they enable actors to *avoid* making connections which might increase their anxieties, distract them from matters at hand, or open the door to unwanted questions. Sometimes, too, these systems incorporate conventions of secrecy, establishing privileged knowledge as a form of property. Secrecy exists both as a set of practices affecting the distribution of knowledge in society, and as an actor's knowledge of these practices and their consequences. The actor's knowledge of secrecy (cf. his secret knowledge) is, for him, a theoretical proposition signifying the necessarily fragmentary, incomplete, and unconnectable nature of many facts about the world [7].

While secrecy and institutionalized ignorance are consistent with a processual view of knowledge, they are anathema to science. In science, facts and ideas are invoked abstractly and systematically, they are pooled and exposed within professional communities, and priority is given to subordinating the particularistic and contingent interests of individuals and groups to universalistic values and standards [8, 9].

The distinction between scientific and non-scientific processes of producing knowledge must be drawn with great care, however. This is a point worth examining in some detail. Latour and Woolgar [6] have argued persuasively that the importance which scientific communities give to subordinating the particularistic interests of their members does not diminish the fact that scientists' actions are played out on an agonistic field. Basing their case on intensive ethnographic research, they conclude that there is "little to be gained by maintaining the distinction between the 'politics' of science and its 'truth';... the same 'political' qualities are necessary both to make a point and to out-manoeuvre a competitor". They also see evidence of the 'economics' of science in the ways in which successful scientists orient their research and writing to protect and enhance the professional credibility on which each of them depends for capitalizing his future work (e.g. by underwriting its factual basis, and legitimizing his claim to financial support). The urge to protect is strong, for instance, when a researcher's theoretical knowledge and labor are embodied in expensive bits of equipment, such as computer banks of theorized survey data, which are designed to materialize only the kinds of facts that are relevant to his special interests and consistent with his already established facts [6, pp. 237-9].

Interesting issues are also encountered in connection with certain technological determinants of scientific knowledge—more specifically, there is the question of whether some of the distinctions between scientific and non-scientific overlay a fundamental difference between the ways in which knowledge is produced in societies and groups with traditions of writing and ones lacking this tradition. There are good reasons for supposing that the appearance of writing was essential for the historical development and accumulation of knowledge [10]. In the case of medicine, for instance, writing enabled practitioners to pass on a legacy of detailed empirical knowledge rather than the sets of conclusions (i.e. theoretical knowledge drawn from practice) to which the oral mode of transmission had heretofore restricted them. Writing also made it possible for them to increase the span, integration, and complexity of their theoretical knowledge. And writing was a technological prerequisite for the social relations needed for producing scientific knowledge, i.e. the organization of scientists to effectively pool and expose accumulated facts and conclusions within professional communities that are contiguous in neither time nor space.

But it is not so much the historical precedence of writing in the evolution of science that concerns me here. (This issue is important for understanding the claim some writers have made regarding the scientific status of the classical medical systems of Asia, however [11].) Rather, I want to call attention to two technical issues connecting scientific knowledge with

systems of writing. One concerns the distinctive way in which scientists use writing to materialize their facts. Following the usage of Latour and Woolgar, I shall refer to this technology as 'literary inscription' and adduce it as further evidence for the social construction of scientific facts. I shall call the other technology 'literary collation' and draw attention to the way in which it affects the specificity—constituting what questions will be unnecessary to ask, and what facts will be difficult or impossible to materialize—of scientific facts in general and anthropologists' interpretations of medical behavior in particular.

Jack Goody [10, chap. 8] has described how, historically, techniques of literary collation—in which writing takes the forms of lists, tables, formulas, and compendia—determined a systematized view of the world that is, in degree, absent from pre-literate societies. He has used this point to criticize structuralist writers, Levi-Strauss in particular, who propose to divide up the world's societies, by means of a 'grand dichotomy', into the hot and the cold, the historical and the totemic, and so on. Goody's remarks can be extended to include the assumption, made by Victor Turner and others, that an exegetical framework is appropriate for collecting knowledge from informants in pre-literate societies. The criticism of structuralist and exegetical positions is that our own literacy-determined, but taken-for-granted, theoretical knowledge of the world has led some anthropologists to misperceive their informants' knowledge in important ways. In a nutshell, they separate knowledge from praxis, and hypostasize knowledge as something (e.g. cognitive structures, symbol systems) distinct from the process by which it is produced. In this way, 'knowledge' is reduced to problematic forms of theoretical knowledge. Concomitantly, other forms of knowledge which determine actors' intentions and behavior, such as knowledge that is negotiated in clinical settings and idiosyncratic knowledge, are either overshadowed or displaced altogether [7, p. 226; 12].

Latour and Woolgar use 'literary inscription' to identify the material operations through which a writer (scientist) works on those of his statements (as these appear in laboratory ledgers, professional journals) which readers recognize as *claims* he is making about objects and events. Through a process of literary inscription, they are transformed into statements that can now be read as simply 'containing' or 'being about' *facts*, i.e. "items of knowledge that are simply taken for granted and utilized in the course of an argument whose main burden is the explicit demonstration of some other fact". Put into other words, literary inscription is a process through which readers are persuaded that the facts to which statements and texts refer exist independently of the operations (writing, reading) through which they actually emerge. It is a process in which writers (scientists) compete with other writers in such a way that reality (the transformation of statements into facts of nature) is a consequence of the settlement of a dispute rather than its cause [6, pp. 75-86, 236, 245].

Before I leave the subject of the differences between scientific and non-scientific knowledge, I want to make an additional point, perhaps an obvious one, about the relevance of this distinction in the case of Western medicine. My point is that much (most?) of

the medical knowledge that is produced in Western, professional, medical practice must be described as non-scientific. Scientific standards are simply inappropriate in clinical settings given over to managing chronic and degenerative sicknesses, or to making decisions where clinical evidence is incomplete or ambiguous [13, 14]. Nor is science an issue where practitioners' decisions are oriented to institutional constraints and rewards (i.e. the conditions of their employment and personal advantage) that obligate them to non-scientific practices [15, 16] or where clinicians' behavior is intended to make clients tractable or to steer them away from opportunities to act or speak in emotionally disturbing or inconvenient ways [17].

THE LIMITATIONS OF ONTOLOGICAL EXPLANATIONS

Earlier in this paper I made the point that anthropologists' premisses about actors' rationality do not preclude the fact that many acts are simultaneously the products of non-rational determinants. Commonplace though this observation may be, many anthropologists bracket out emotional and psychological factors from their analyses. While this strategy can be justified for some behavioral domains, economic behavior for example, it is unacceptable in the case of medicine.

Arthur Kleinman [18] has recently underlined the importance of the non-rational determinants of sickness and health seeking behavior, particularly in connection with dysphoric states, arguing eloquently that medical anthropologists can ignore these determinants only at the risk of trivializing their clinical observations and conclusions. Kleinman's program is based on what I have described as a processual view of medical knowledge.

Why a processual rather than a structural view of medical knowledge? Structural accounts deal with non-rational determinants in three ways; either they ignore them by limiting analysis to the cognitive structures which ostensibly underlie medical behavior; segregate them as proper to the interests of specialists, such as experts in 'psychiatric anthropology'; or acknowledge the pervasiveness of non-rational forces but, at the same time, domesticate them in the service of structure. The limitations of the first two options are clear, I think, and they are considered at length in Kleinman's book: each constitutes a fragmented and idealist understanding of medical behavior, shutting out key sickness processes such as the somatization of interpersonal conflicts, and making it difficult to speak about the relative efficacy of particular medical practices and medical systems. In this section, I focus on the structuralists' third option which, I want to show, is a false trail leading away from knowledge of the irrational and socially disruptive meanings of the non-rational determinants of medical behavior.

The structuralist trail begins with the reasonable enough assumption that ontological security is a prerequisite of social life. Put into other words, it is assumed that a sense of reality is inseparable from the practical arrangements people need in order for them to reproduce themselves biologically and socially.

From the actor's point of view, ontological security means confidence in the substantiality and continuity of one's self and others, and the concreteness of the cognitive structures—systems of classification and modes of induction—through which he interprets the world. Its diminution is painful, leading to anxiety or anguish, and its absence is fearful and psychopathogenic [19, 20].

Anthropologists have tended to concentrate on two sources of ontological security. First, cognitive structures are regarded as a source when they constitute an observation language and plans of action that produce self-validating experiences—when they are, in Clifford Geertz's phrase, simultaneously models of and models for reality [21]. A corollary is that cognitive structures are sources of ontological security when they rarely allow experiences to appear in contradictory ways [21, pp. 7-8, 12-24; 22].

Second, some writers make the point that people find the products of cognition real and convincing when their beliefs are infused with strong emotions and psychological energies. Sometimes, these writers see cognitive and emotional elements reinforcing one another, so that a set of beliefs achieves ontological status because it is both cognitively adequate (i.e. self-validating and rarely contradictory) and emotionally charged [23]. In other instances, writers see emotional sources as contributing to the ontological adequacy of experiences and observations which are cognitively inadequate. A prototype of this view is Emile Durkheim's well known description of Australian aborigine ontology in *The Elementary Forms of the Religious Life*. In this book, Durkheim invokes 'society' as the source of universal beliefs about space, time, causality, etc. But he is left with the question of why aborigines continue to believe in the reality of society in spite of weak and discontinuous evidence that they produce about it cognitively. Durkheim answers that the exciting events of the annual coroboree celebration charge an aborigine's ontological batteries with enough psychophysiological energy for him to spend the rest of the year in the socially barren outback without losing his sense of the concreteness of society.

The ontological propositions can be supported by persuasive philosophical arguments and some clinical evidence. My point is that once they are incorporated into a structural view of medical knowledge the propositions are likely to be misleading. To make this point, I shall focus on the three main kinds of ontological accounts that structuralists use.

The first account is associated mainly with analyses of spirit possession cults. This account says:

(a) psychological distress and disorganization develop when a person becomes aware that there is a painful lack of coherence between the way he believes things need to be and the way they actually are;

(b) the distress is expressed in symptomatic ways that are recognizable to the sick person and other members of his society; and

(c) there are medical practices which are available to the sick person and they can reduce or eliminate these symptoms by redressing his state of ontological insecurity.

It is in this connection that I. M. Lewis calls attention to the socially peripheral status of possession cult

members and the symbolically powerful and assertive character of the spirits with whom they come to be associated, and to the ritualized capacity of cult members to re-order some aspects of their socially subordinate positions [24].

Unlike the other two ontological accounts, this one is capable of giving strong empirical evidence in support of its contentions, since it refers to observable 'before and after' behavior. However, there are serious problems with this account. First of all, convincing data are difficult to collect and ethnographic accounts of this sort often rely on anecdotal evidence, tendentious symptomatic judgements, and researchers' problematic impressions of actors' ontological states. These methodological problems aside, there is no real case for regarding this as a distinctive account of people's medical behavior. For one thing, there is no obvious reason why an ethnographic account should have to distinguish instances of distress which originate in particular ontological states from instances traced to more conventional psychiatric origins [18, Chap. 5]. For another, while many accounts of spirit possession cults treat sicknesses caused by cult spirits as an ancillary concern, interesting mainly as events through which people join these cults and gain access to ontological strategies and 'philosophies of power' [24], there is ethnographic evidence that suggests cult members often see their continued participation in medical terms, as a means of avoiding or ameliorating episodes of somatic complaints to which they are uniquely vulnerable—a view of cult participation not so different from many of our own ideas about chronic sicknesses [25]. By substituting an ontological explanation of events for the actors' somatized accounts of their situations, the analyst weakens the link between the actors' knowledge, intentions, and evaluations, on the one hand, and the analyst's conclusions about the efficacy of the actors' practices (and one reason for their persistence), on the other hand.

Perhaps the most famous example of the second account is Mary Douglas's exposition in *Purity and Danger*. This account describes episodes in which:

- (a) ontological insecurity is *not* expressed in emically symptomatic ways nor are its behavioral manifestations obvious to the researcher;
- (b) it affects most members of the community; and
- (c) it is periodically reduced by means of ritual practices which have an ostensibly medical purpose.

Given their chronic ontological insecurity, people want to perform ontology-affirming practices because they experience the acts as pleasurable or satisfying, temporarily reducing their anxiety or anguish.

This account says that sometimes medical practices persist because they ameliorate chronic but asymptomatic anxieties that are unrelated to the medical object of the practice. Because actors' distressed states cannot be observed directly, they must be inferred from ontology-threatening circumstances external to the individual, however. This generally means inferring ontological dissonance from contradictions or conflicts the researcher has observed in the social or cultural system, e.g. incongruities between worldly striving and the finality of death [26].

This is a plausible and distinctive argument, but it is a weak one. Like the first account, it neglects the link between the actor's knowledge and the analyst's conclusions about the effectiveness of the practices. Also, it ignores important questions about the ways in which actors' knowledge about the world is used and produced, and concentrates on an intellectualized and theory-centred view of things. But we have reasons to suppose that incongruities at the level of system and society are not necessarily evidence of dissonance at the level of individual consciousness, since actors tend to invoke ideas and values in a piece-meal and recursive fashion [5, Chap. 2; 27]. Even if individual actors can make statements that indicate incongruities, these statements are problematic until they have been submitted to epistemological scrutiny. It is generally evidence representing theoretical or negotiated knowledge that is accessible to anthropologists, but what is its existential (ontological) meaning? Finally, this account makes the problematic assumption that individual consciousnesses necessarily tend toward homogeneity in tribal and traditional societies, that they are products of a uniform set of life experiences [28, 29].

The third account figures conspicuously in the writings of Victor Turner. Following Durkheim's Australian example, this account sees practice mainly in terms of its capacity to:

- (a) give *axiomatic* ontological status to its own symbolic meanings, and
- (b) redress contradictory beliefs and experiences in socially functional ways.

In this account, the writer does not assume that any actors are ontologically insecure; it is necessary to assume only that extant contradictions and incongruities *could* lead to this state but that ritual prevents this from happening.

This is essentially a technological account, giving priority to the techniques which produce axiomatic meaning. Perhaps the most thorough-going example of this approach is Turner's analysis of certain Ndembu medical practices. Because I want to refer to this technological argument later in the paper, let me give a synopsis of it here.

The core of Turner's exposition is organized around "the mighty synthesizing and focusing capacity of ritual symbolism" [1, p. 185]. Using his informants' exegetical comments, Turner uncovered a series of cognitive devices used by Ndembu in ritual settings. In most cases, the instrument consists of a string of ideas or images which are drawn from a single domain and linked to one another by a metonymic principle, such as physical contiguity and etymology (e.g. a string of physical properties associated the species of trees used to manufacture the *chishing'a* shrine). But the ritual apparatus also incorporates strings of ideas and images which are not already associated in nature or language. It is these latter strings—consisting of ideas about social relations (e.g. a man's elementary family, his matriline) and valued behavior—which the apparatus operates on, synthesizing a bond among the dissociated, and even contradictory, elements. The apparatus does this by analogizing the dissociated strings with the metonymically united ones, in ritual settings.

The strength and intensity of the analogical mechanism come from the facts that in the rituals:

(a) the metonymic sets have been arranged in series, like batteries in an electrical circuit, so that several metonymic sets are simultaneously binding together the elements within each non-metonymic set; and

(b) certain symbols in the series have a strong orotic character [1, pp. 18-19].

(Certain ritual contexts are also associated with the transfer of psychological energies [1, pp. 81-2, 182, 192, 236-7, 239, 268].) Moreover, some symbols appear in many metonymical series and, in this way, collect great resonance, so that they become "charged with mystical efficacy. Our storehouse is also a powerhouse. In other words, we are dealing with information that is regarded as authoritative, even as ultimately valid, axiomatic" [1, pp. 2, 274-5, 277]. Turner adds that the analogical mechanism is not static, since an intense interaction occurs between and among all of these sets, leading to a progressive elaboration of meaning [1, p. 197].

It is easy for this third account to slip into a teleological-functional interpretation, since it pushes actors' intentions so far into the background. That is to say, the account describes how practices satisfy ontological and social imperatives (e.g. ameliorate structural contradictions, make cognitive structures concrete), and it answers the question of why people would want to perform these practices even though they are unaware of their specific functions, i.e. because they embody axiomatic values and are underwritten by axiomatic knowledge.

In order to accomplish this, it reduces behavior to what is nearly automatism. Thus, this account is only as good as the technical argument that it uses to justify the axiomatic quality of beliefs. But this is precisely the problem, since Turner's case is based on the existence of a ritual apparatus which he has constructed from exegetical, theory-centered, data. And while it is true that he attributes a process of knowledge production to this apparatus, it is in the form of a self-validating process of ideas—consisting of the 'interaction' between sets of analogies within the ritual apparatus—giving rise to elaborations of meaning rather than recursive knowledge, and only poorly connected with the events that actually take place in (almost?) all medical settings.

THE ROLE OF IDEOLOGICAL KNOWLEDGE

Knowing *how* actors perceive and evaluate their courses of action is not equivalent to explaining *why* they do these things in their characteristic ways. Even if it were possible to give complete and processual accounts of actors' medical knowledge and intentions, this information would be insufficient to explain why, within a particular community or society, certain medical behavior and practices have their characteristic distributions among different groups and classes of actors.

To explain 'why' as well as 'how' one needs to take account of three sets of determinants. To begin with, there are the *technical determinants* of medical knowl-

edge, i.e. forms of theoretical knowledge, medical instruments and materials, skills needed to use them, and the active and tacit cooperation of other people. Next are the *social relations and environmental conditions* which determine actors' differential access to medical knowledge and its technical determinants, on the one hand, and their differential exposure to pathogenic conditions, on the other hand. Finally, one needs to know something about the *ideological determinants* of medical knowledge and disease epidemiology.

Because there is a well known literature, by historians of medicine and philosophers of science, on the technical, social, and environmental determinants of medical knowledge and sickness epidemiology, I shall skip directly to say something about ideological determinants. My objective in this section can be summarized as follows: at the same time that medical knowledge and behavior is being determined by social relations—e.g. by the professionalization of medical practice, conventions of secrecy, access of male practitioners to the bodies of female clients, allocation of control over household resources—actors are aware of these social relations and have certain ideas about their legitimacy and where they belong within the taken-for-granted scheme of things. It is in terms of how actors' knowledge of social relations affects the kinds of medical knowledge they are likely to produce and act on that I want to define ideological determinants.

Anthropologists have used 'ideology' in different ways [21, 27, 30, 31], but this is not the place to compare their various usages. I shall say only that I am using the term to refer to any form of knowledge in which an actor represents to himself:

(a) himself, other actors, and human collectivities as subjects, i.e. each as an integral and continuous locus of initiatives, perceptions, potencies, vulnerabilities, and responsibilities; and

(b) relations of dependence, domination, authority, etc. between and among these different human subjects.

Beliefs about sickness and healing are ideological because they identify locations and forms of power and moral accountability, and describe some limits of what a person can expect to know or do about his worldly circumstances and some of the consequences of exceeding these limits, e.g. knowledge that certain forms of sickness follow upon moral delicts, that the accumulation of spiritual power manifests itself in the ability to heal. I am using 'ideology' in a way that includes not only sets of *beliefs* but also the *practices* that produce this knowledge by materializing certain objects and events in the course of medical episodes (as symptomatic behavior and cures, for example) and make it unlikely that other orders of objects and events will appear.

The ideological knowledge that is produced in medical settings often resonates with ideological knowledge people produce in other domains of life, including political and economic ones. Ideological resonance is explained in a couple of ways. First, actors in sickness episodes often find it necessary to behave in ideologically resonant ways in order to control other people or avoid unwanted social or psycho-

logical consequences. In these cases, an actor must be able to behave in ways which other people will recognize and respond to. But his behavior takes its meaning within a society-wide system of roles and social identities, and, so, it is structurally determined by the behaviors and meanings that are intrinsic to other, non-medical, ideological practices. For example, Foucault [32] and Turner [33] describe instances in which the behavior of madmen in 18th century Europe and witches and sorcerers in Africa are conceived as mirror images and inversions of idealized everyday behavior. Second, determinants of medical knowledge—i.e. particular sets of social relations, skills and equipment, theoretical knowledge—are sometimes used to produce knowledge for non-medical interests also. Amhara use the same divinatory instrument to produce knowledge about medical, economic, and rural interests [34]; in the United States, social and behavioral scientists use the same sets of social relations (researcher:subject) and theoretical knowledge (of the 'abstract individual') to produce facts about pathogenic stress, on the one hand, and the class structure of society, on the other [25].

In these ways—by materializing ideological knowledge through medical/ideological practice, by resonating ideological knowledge across fields of action—the socially constructed natures of sick persons and healers are made natural, unavoidable, and authentic (assuming for simplicity's sake that the actors are untroubled by contradictory ideological knowledge).

In each of these respects, medicine is like most other ideological practices. That is to say, it helps reproduce the authenticity of its own social determinants: it reproduces specific patterns of control over:

- (a) the technical course of sickness episodes (who chooses what technologies on which occasions), and
- (b) the knowledge, skills, and resources needed to materialize the ideological product (who operates what technologies).

For example, I have tried to show elsewhere that some key Amhara medical beliefs are determined by social relations within collectivities of healers and between healers and their clients. In brief, Amhara peasants believe that there are sources of generic healing power, certain spirit healers have access to this power, and the healer's ability to control the technical course of sickness episodes is the product of relations between people and spirits rather than what it really is, the product of relations between people [3, 33, 35]. The peasant's knowledge is determined by the fact that spirit healers are organized into a kind of market on which they exchange and pool knowledge of cures against a wide variety of ailments. Peasant herbalists are excluded from the market—they are generally illiterate and literacy is a prerequisite for entering the market—and each is limited to the few medical recipes that he inherits from relatives. Further, while a spirit healer owns several diagnostic (divinatory) techniques, the herbalist usually owns none and he can only provide the therapy decided on before visiting him. Thus, a spirit healer both owns and controls his medical knowledge and skills, in the sense that it is he who decides which practice will be employed and, so, which etiology, sickness, therapeutic powers, etc. will be materialized in the clinical setting. The herbalist,

whose limited medical knowledge seems fragmentary when his clients compare it with the spirit healer's, must share control with his clients. Finally, clients' knowledge of the spirit healer's generic healing power resonates with their knowledge of other universal forces, specifically with their beliefs about the spiritual forces which support and give legitimacy to the Ethiopian Orthodox Church.

Medical behavior can never be reduced to ideological determinants, of course. The effects of ideology are, in each instance, a subject for empirical research and, having identified ideological practices in theory, one cannot simply assume that they are affecting actors' decisions in an important and direct way. Finally, to the extent that particular ideological practices and life conditions are not uniformly distributed within a community or society, there is no reason to suppose that one would find there homogeneous and non-contradictory ideological knowledge.

CONCLUSION

I want to conclude by making three brief observations about the implications of ideology for the anthropologist's knowledge of his informants' medical beliefs and practices.

First, scientific knowledge and ideological knowledge are not necessarily contradictory forms of belief, since scientific practices simultaneously produce ideological knowledge. This is particularly the case of the human sciences, which include both the medical and social sciences.

It is easy enough to recognize the ideological character of medical practices that materialize their facts outside the sick person's body. This is characteristic of medicine in many non-Western societies where, for example, diagnosis is intended to identify morally important events and curative intervention is commonly expressed in a healer's ability to exercise power and persuasion against human and other anthropomorphic sickness causers. Because Western medical practice materializes sickness in terms of intrasomatic events, it is obviously different. Yet, in spite of these clear differences, it would be incorrect to suppose that Western medicine does not also produce ideological knowledge. The situation of the human sciences is analogous, in the sense that a claim to scientific knowledge is no vouchsafe for non-ideological facts. The contrary view, that because Western medicine is internalizing and the human sciences scientific they produce non-ideological knowledge, is mistaken for two reasons.

For one thing, it is a narrowly empiricist view, and overlooks the fact that science produces knowledge in ways that are predetermined by factors which lie outside the facts it wants to understand—by an already theorized observation language, analogies and metaphors borrowed from other discourses, and historically determined sets of social relations and arrangements [9, 36, 37]. In addition, the ideological product of the human sciences appears to have a non-ideological and universal form only because empiricists choose to bracket out the social determinants of knowledge. In the case of medicine, for example, social determinants of sickness can generally be added or deleted from the analyst's descriptions, according

to his inclinations, without affecting the identity of the ailment in question. In this way, ideological practice materializes the individual as the *terminus a quo* of responsibility for his life condition, on the one hand, and reduces his life condition to symptomatic behavior and its proximate organic and interactional determinants, on the other. By this ideologically resonant act, establishing the methodological and analytical primacy of the desocialized and classless individual, practice shifts attention away from the social processes and arrangements that reproduce conventional knowledge of sickness and society [3].

Second, one of the most important empiricist tendencies is to see the uniqueness of science in terms of distinctive technological factors, such as falsifiable hypotheses, replicability of results, and techniques of quantification, and to ignore its special social determinants. This fact has important implications for the anthropological discourse on medicine, where the empiricist version of science has played an historical role as an analogy—i.e. a set of propositions and relations used to identify and examine other sets—for studying the beliefs and practices of non-Western peoples.

It is in this connection that I earlier described the technology-centered character of Victor Turner's Ndembu analysis. I called attention to his description of the axiomatic nature of certain kinds of knowledge, and the operations of involutionary processes through which ideas appear to beget other ideas, unimpeded by the material and social determinants of this knowledge [1, pp. 270–1; 38].

Third, what I am saying, then, is that the proper study of African medicine is simultaneously the study of our knowledge about medicine. To forget this is to accept what is perhaps the most influential ideological belief of our time, i.e. that scientific inquiry gives access to ideology-free knowledge.

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IV (c) IGNORANCE

THE IMPORTANCE OF KNOWING ABOUT NOT KNOWING

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Abstract—Within a pluralist medical culture, there is (from the doctors' point of view) a hierarchy of medical systems, differing in their wealth or power and in the degree of their systematisation. In the case studied, traditional medicine is at the bottom of the hierarchy and is so un-systematised as scarcely to constitute a system, though it flourishes nonetheless. The lack of system is seen in the disunity of traditional doctors, in their lack of a single consistent theory and in the wide variation in meaning in the medical terminology in daily use. Because traditional medicine is not itself a system, the claim of Islamic and European medicine to be systems of universal validity is popularly denied; they are simply tacked on (along with their 'new' diseases) to the existing kaleidoscope of medical ideas. Patients, then, unlike doctors, recognise only a single, wide-ranging corpus of illnesses for which all the different healers between them should possess the cures. The patient is not interested in knowing the cures or the ideas; nor are doctors necessarily interested in all the causes. Indeed what is striking is how little either patient or doctor needs (or wants) to know. Consequently, in analysing the popular culture, the notion of 'alternative systems' is largely irrelevant.

INTRODUCTION

I wish to raise again the question of how much people know, and care to know, about their own medical culture, and how much a practitioner needs to know in order to practise his medicine. For if the answer to both questions is 'very little', then the concept of 'medical system' will need to be re-examined as will the notion of pluralism. In this essay I suggest that under certain conditions not-knowing or not-caring-to-know can become institutionalised as part of a medical culture, and that it is inadequate then simply to claim there is still at work an unconscious system embedded, for example, in the language.

The reluctance in ethnography to record what people do not know is understandable: it is hard enough to record what they do know. On a superficial level every investigator has received the answer 'don't know' and has been unsure whether the answer was the truth or simply a snub. Many an anthropologist has relied on his one, best informant, if for no other reason than that he 'knew' and could express what he knew. Without such an informant, models are apt to be constructed like a jigsaw from information collected piecemeal from the less knowledgeable; the process is embellished sometimes by the label 'cross-checking'. In an earlier paper [1], I have argued that medical information in particular is liable to be layered, and as an outsider one may seep through into the inner layers of knowledge: yet the deeper one goes, the less certain is that knowledge. Furthermore, the researcher is always open to having his leg pulled, particularly as the process of inquiry is often either richly comic or deeply aggravating to others. None of this should surprise us, accustomed as we are in our societies to the uneven, often bizarre distribution of knowledge, though I am astonished at our subsequent claims to know something as recondite as another

medical culture. To discuss, then, the extent of not-knowing is presumptuous in the extreme; nonetheless to ignore the existence of not-knowing in medicine only negates our very claim to know another medical culture.

My other concern in this essay is the problem of alternative systems. Instead of treating them as isolates or even as competing equals, I rank them in a hierarchy of organisation and access to government funds. For it is clear that the different methods of treatment vary widely in the extent to which they are systematised and recognised as a system by practitioners and patients. In short, the problem I suggest is one of inequality and the effect this has had on traditional medicine and its relationship to other methods of medicine.

The connection between not-knowing/not-caring-to-know and a hierarchy of medical systems lies in my argument that the medical system at the bottom of the hierarchy can become de-systematised and that one striking symptom of this is a widespread attitude, to be found among patients and to a lesser extent among practitioners, of 'don't know', 'don't want to know'. In our own societies, lay disinterest in the intricacies of medicine is common-place, but the public recognises that there is a system. What I am suggesting here is that under certain conditions traditional medicine is not recognised even as a system—yet it can still be practised widely and be patronised by the public.

To convince the sceptical reader I have to show first that there is a hierarchy of medical systems; second, that there is such a thing as a 'non-system'; third (and hardest of all) that not-knowing and not-caring-to-know are genuine attitudes of mind and that they are very important to the medical culture. Negative evidence, which might reveal a non-system and extensive not-knowing, is not commonly

recorded in ethnographies: their purpose was, naturally enough, to explain a *system* or medicine and to unravel the complexities of *knowledge*—and in the past no doubt systems were really systems. So I will rely instead on my own data which I offer here merely as an example: for, let me repeat, I am acutely aware how presumptuous this excursion into not-knowing is. It would be difficult enough even in one's own medical culture, let alone in another people's.

Lastly, I am using the term 'medical culture' for all things medical that go on within a particular geographical area. It is consequently a wider term than 'medical system', as will become clear from the example that follows.

EXAMPLE: THE MEDICAL CULTURE OF THE MALUMFASHI AREA

Malumfashi (Kaduna State, Nigeria) is by Hausa standards a medium-sized district headquarters which in the 1963 census had a population of 17,000; the district's population was 177,000. A strongly Muslim, Hausa town, it nonetheless had a Christian immigrant population from more southerly states of Nigeria and a scattered 'pagan' Hausa or 'Maguzawa' population in the surrounding countryside. I came to Malumfashi in 1969, after some 6 years of historical research elsewhere in Hausaland, in order specifically to study Hausa medicine. My three years of research were completed before large-scale studies by the Medical Research Council and the World Bank-financed Funtua Agricultural Development Project got under way. Most of my research was conducted from a Maguzawa house 15 miles from Malumfashi, but only after an intensive survey of a Muslim village and a hamlet had been carried out. My data are best, therefore, for the most traditional end of the spectrum that makes up Malumfashi's medical culture.

At one end of the spectrum of medical practice is the set of treatments deriving from 'Western' or hospital medicine. A branch of Ahmadu Bello University's teaching hospital is located on the outskirts of Malumfashi town; so too, are or were Protestant and Catholic mission dispensaries. Government dispensaries and leprosy clinics operate too in the area, as do, at a much more informal level, peddlers of pills, liniments and even injections. Though conventionally one describes hospital medicine as a coherent system and the hospital as a single homogeneous unit, in reality, the hospital is staffed by people of widely different cultural and linguistic backgrounds and of varied technical competence: yet all these, in their private capacity, represent hospital medicine and may give advice or procure treatment after their own manner.

At the other end of the spectrum is the enormous variety of treatments that is included under the label 'traditional'. The variety reflects not only the diversity within the culture of the dominant Hausa group, but also the large immigrant population some of whom even import folk culture (for example, rosicrucian ideas) from abroad. Between these two ends of the spectrum is Islamic medicine, relatively strongly systematised but which overlaps, in its herbal specifics with 'Western' medicine, and in its concern for spirits

or *jinn*, with traditional cures. The core of its treatments is based on the use of Arabic texts, and its practitioners are expected to be Islamic scholars or students and to work within an Islamically orthodox framework. Government and universities, though providing education in Islamic studies, do not specifically include Islamic medicine, but much of what is taught is relevant to it; furthermore, the texts of Islamic medicine in Arabic are widely available.

The historical antecedents of this medical culture are broadly as follows. During the 19th century the area became de-populated so that Malumfashi town was only re-settled less than 100 years ago. A large proportion of the present population migrated in from adjacent areas between 1890 and 1930 and still retain something of a frontier atmosphere there. Though the early 19th century Islamic reform movement was the source of the local political and ideological framework which governed the new frontier community, the community's territorial expansion was possible only under colonial rule. The early period (c. 1903–1940) of colonial government also witnessed the burgeoning of a more strict Islamic culture throughout Hausaland, in part as a response to colonialism; by contrast the impact of Western culture, and Western medicine in particular, was slight. Only in the later colonial period (c. 1945–1960) and during the decade since independence, has modern medicine become part of the area's medical culture; along with dispensaries there also came schools and all that better roads brings. The degree to which 'Western' medicine was associated with colonialism (as, for example, in the manner described by Frantz Fanon in *A Dying Colonialism* [2]) is not clear; certainly an unflattering folklore exists. Much more important historically, however, has been the role of Islam in 'colonising' the medical culture of the area. By according non-Muslims an inferior status politically and culturally, Islam has undermined the authority of traditional medicine. Maguzawa, though diverse and often Muslim in origin, now form part of a rural lower class and are treated almost as a pariah group for whom the peddling of traditional pagan ritual services is seen as an appropriate part-time occupation. Since other aspects of non-Muslim Hausa culture have been of less interest to the rest of the community, many of the traditional social ceremonies such as initiation and even weddings have been shorn of particular elements or gradually altered their significance. However, the formal continuation of non-Muslim culture has been necessary in order to validate some of the rituals of traditional medicine for the rest of the community, and, if for no other reason, the specifically non-Muslim aspect of this segment of society still persists. Meanwhile Islamic medicine, faced with the recent extension of hospital medicine to the area, has become predominantly the medicine for social ills, preventing or curing unpopularity, warding off financial disaster. It still offers a wide range of specifics, especially for ailments that hospitals do not cure, but it faces considerable competition in this from patent remedies of a modernising kind.

In short, the sequence of dominant medical systems within this medical culture is:

- (a) A putative traditional Hausa medicine now

maintained, probably in a much altered form, mainly by Maguzawa [3].

(b) An Islamic medicine which was particularly strong during the early colonial period.

(c) Hospital medicine, important in the late colonial period but now freed from its association with colonialism and financed by government.

HOW FAR IS TRADITIONAL MEDICINE IN MALUMFASHI STILL A SYSTEM?

The criteria I wish to use in assessing how far a method of medical practice is systematised or is seen by either its practitioners or its patients as a system are as follows. The top end of the scale would be occupied by a system in which:

(a) There exists a group of practitioners all of whom clearly adhere to a common, consistent body of theory and base their practice on a logic deriving from that theory.

(b) Patients recognise the existence of such a group of practitioners and such a consistent body of theory and, while they may not be able to give an account of the theory, they accept its logic as valid.

(c) The theory is held to explain and treat most illnesses that people experience.

Applying these criteria to traditional medicine in the Malumfashi area, we find: first, traditional healers form a category in M. G. Smith's terms, rather than a corporate group [4]. They have no association, no exams, no standard treatment. Indeed they compete with one another, using different curative techniques. There is in consequence no 'local doctor' accepted by all the community and as choice of practitioner is also governed as much by kinship links as by medical reputation or convenience, a more distant healer is often consulted before the neighbourhood expert.

The various Hausa terms used, *boka*, *mai magani*, *mai Danko* (or *mai BaGwari*, etc.), *Sarkin Mayyu* do not denote either a hierarchy of skill or an area of medical specialisation—though they might provide a clue to the healer's sex or ethnic background [5]. The distinction between, say, herbal remedies (from a *boka*) and spirit possession rituals (from a *mai Danko*) is spurious, since both a *boka* and a *mai Danko* will use both kinds of treatment.

The technicians of traditional medicine—the barber-surgeon (*wanzami*), the bone-setter (*madori*), the midwife (*ungozoma*)—form a separate group; they are treated more as professionals and tend, in any case, to be Muslims. Only the first, the barber-surgeon, is formally recognised as a craft, with the local expert appointed as Master-Barber (*Sarkin Aska* or *Magajin Aska*) and is thus in effect licensed (e.g. to do circumcisions). The other two professionals render strictly limited services, but nonetheless vary widely in the details of their techniques. They are not required to diagnose illnesses since they are called in only to perform their specialised duties.

By contrast the traditional healer not only has to diagnose but also may be called upon to render a range of services like fortune-telling, supplying poison, guarding or otherwise coping with wandering

lunatics. In practical medicine, his main rivals are the individuals, to be found in almost every house, who have inherited some specific nostrum (for example, against the pain of scorpion bites), or amateur practitioners of spirit possession. But major problems, like mental illness, are not amenable to do-it-yourself home remedies and these, along with residual cases of medical catastrophes, are apt to end in the care of the *boka*.

Nevertheless a proportion of all traditional healers have to take to the road and peddle their skills often among 'foreign' communities such as the Yoruba; similarly healers from the Niger Republic tour the Malumfashi area. The value of their remedies lies in their very strangeness, in their *not* being part of a known system of medicine.

In short, the range of traditional healers that serve the Malumfashi area cannot be said to adhere to a single consistent theory of logic—except insofar as they are defined negatively, as *not* offering hospital or Islamic medicine. Nor, since traditional medicine is too diffuse to be monopolised, do healers form an exclusive group.

Second, patients and their kin do not expect their traditional doctors to have a consistent theory or form a cohesive group. Instead, they accept that the different systems and methods of medicine have only a limited validity, though people do treat traditional medicine also as a residual category, when other methods seem too dangerous or simply inadequate. This is best illustrated by a folk theory of ethnoecology which, given the social component in illness, has considerable sociological insight. According to this theory, each ethnic community carries within itself not only its own specific illnesses but also its own cures. Thus European medicine was necessary originally only for Europeans, then later for those who have to operate in European society; now, finally, as 'modern medicine' it has the best cures for modern illnesses caught in modern society. Similarly, Muslim medicine, though much less sinister (and less powerful), is nonetheless essential for those who have to visit or work in a Muslim community, while non-Muslim medicine can cure, for all members of the community, not just the ailments caught deep in the bush but also aberrant 'throw-backs' like lunacy or a sinister malformation. Fulani pastoralists (who share the deep bush with Maguzawa) also have their own ailments and cures; but both groups tend to treat each other's patients for some illnesses, thus transferring to the other group not only the patient but also some of the blame for the illness' existence.

In this ethno-ecological theory, then, medicine is being seen not so much as a medical system but as part of the necessary cultural camouflage, like clothing and food, that enables one to survive, preferably unnoticed, in a diverse society. There are not 'alternative' treatments, only appropriate ones—appropriate, that is, to the place where one happens to be.

But the theory is more complicated in practice, and has been modified over time. For example, hospitals are now recognised as at least temporarily effective against traditional illnesses, since hospitals, so carefully fenced off and manned with guards, are 'no-go areas' for spirits; relapses may occur, though, as soon

as one leaves the gates. On the other hand, and particularly in the past, one needed one's own medicine as well in order to survive a stay in a hospital—since hospitals are places of extreme danger (being one of the sources whence Europeans derived their magical power and domination over the local community), and one has to be protected from the doctors too. Implicit here is the recognition that the medical and geographical sphere in which traditional medicine is relevant is liable to shrink, and indeed has shrunk in recent times. Certain classes of spirits, for example, have died out, while other spirit-linked illnesses are confined now only to women. In short, one of the fundamental premises of traditional medicine—that spirits control illness—seems to be giving way, and if the present trend continues, only the herbal aspect of traditional medicine will survive while spirits become for some mere figures of the theatre.

Third, from what has already been said, for traditional medicine to have a single comprehensive theory to account for all illness is out of the question. But it seems that even a coherent set of ideas, embedded in the language or implicit in people's actions, has now disappeared. Fragments of a theory, with associated medical 'facts', seem to survive, but it also seems impossible to make a proper historical reconstruction for any particular period, place or people; in the theory's break-up, the fragments and the 'facts' have themselves been altered beyond the recall of men's memories. The most striking evidence for the difficulty in prising a coherent theory out of the language is the lack of an agreed medical vocabulary not only among patients but also among practitioners. In trying to construct a Hausa medical dictionary I found what several others before me have found—as a comparison of all our vocabularies shows—that a large proportion of medical words (but especially terms for illnesses) have no standard meaning. The Ministry of Health issued a list of terms which are gradually gaining acceptance but so far they remain officialese and patients in the know have learnt to use the appropriate vocabulary in hospitals [6]. Hausa-speakers recognise the problem, and recognise too how words change their meaning not only over time but also in differing places and sub-cultures. Such changes in the meaning of words can result in a new medical treatment which seems to contradict even the minimal logic behind the original, similarly named treatment. The best example of this is the elaboration of *gishiri*, an illness I have described elsewhere [7]. In medical discussions I have also heard people 'incorrectly' applying to things Arabic-based labels new to them but standard in the towns. In this linguistic and dialectal diversity it is not surprising that certain stereotyped illnesses tend to be used not so much to describe a complaint as to pre-empt further discussion or diagnosis.

It is likely, though hard to prove, that the terminological confusion has grown rather than diminished over the years. Certainly, one effect of the lack of a widely agreed medical terminology has been to prevent people now from recognising any unified theory of Hausa medicine. My own efforts with informants at constructing such a theory tend to be met with polite interest rather than agreement! Despite this, I believe there is a 'commonsense' knowledge for which the

analyst can draw some general rules—although these rules may be more honoured in the breach than observed. Indeed the rules, like proverbs, may be contradictory, and used by people only to judge if a particular explanation 'sounds possible'.

From this brief account of the traditional segment of Malumfashi's medical culture, it should be clear that traditional medicine, if not perhaps a 'non-system', is now extremely un-systematised in practice. Only a small part of traditional medical practice, the technical specialists, might be considered to constitute a system—and, perhaps in consequence, it is they who are being drawn gradually into government's orbit.

SECRECY AND SCEPTICISM—CHARACTERISTICS OF A MEDICAL NON-SYSTEM?

Although, in suggesting that traditional medicine is no longer a system, I have been describing it in rather negative terms, yet the resultant medical sub-culture is thriving as a non-system. It certainly has not withered away; rather it has accentuated certain characteristics, some of which are familiar from other ethnographies (such as the Azande as described by Evans-Pritchard) and are certainly not unique to Malumfashi. For people here, it seems, adapted to the lack of systematisation in their traditional medicine and have over time adjusted their ideas and practices. In particular, the extent to which people now 'don't know' or do not wish to know is remarkable, and old men complain about this (as, I admit, is the habit of old men!).

The most notable characteristic is the extreme, institutionalised secrecy surrounding medical matters. It is inappropriate for a practitioner to be asked or to describe his methods. They are the secrets of his trade. It is inappropriate too for a patient to discuss his ailments except among his closest kin. Generalities or even disinformation is given to, and expected by, solicitous or inquisitive neighbours. To reveal a knowledge of, say, anatomy or physiology is dangerous since that implies witchcraft—a cause of illness seemingly on the increase because another consequence of the importance now given to secrecy is that individuals are not only a more obvious source of attack but also a more vulnerable target. Indeed to show any interest at all in any one ill is a social gaffe; witches are notoriously concerned for their victims and mourn them the most. With the gradual breakdown of lineages and wider kin groupings, individuals have to rely increasingly on their own medical defences. The devolution of authority has also brought about the devolution of clan 'secrets'. Though the head of a house still retains his house's 'secrets', increasingly individuals have their own personal 'secrets', with the result, I think, that there is now a third layer to many people's idea of themselves. At the risk of systematising the unsystematic I suggest that whereas in the past there were two layers to one's self—the natural, physical inner layer sustained by food and cured by herbs; the social, psychological outer layer sustained through kinship and cured supernaturally—now there is a third, one's individual self, undefined, unknowable, largely indefensible except through 'secrecy'. Islamic culture supports this idea, but does not dispel the disquiet. With the cures of traditional medicine

now no longer wholly valid (because there is a new layer of oneself at risk now), illnesses are redefined as an endless, shifting state of being, to be alleviated but never cured, not even ultimately diagnosed. In short, people really do *not* know, truly 'don't know' through a combination of secrecy, uncertainty and scepticism.

Scepticism, then, is the second salient characteristic. Scepticism about the motives and self-image (though not the naked power) of external authority has long been entrenched in the culture; the joking and mockery has become traditional, for example, in spirit possession. But fun too is made of local healing rituals and expose the deceit involved. Admittedly to do so is considered risqué, but people are amused, not shocked. A very tenuous veil of fiction is maintained over spirit possession. The scepticism is different from the familiar levity in ritual that so shocks the solemn, or from jokes of the committed believer (such as only Catholics or Jews can make in our own societies). Similarly, the value of actually taking the medicines prescribed by the healers consulted is *de facto* questioned since little of the medicine is usually consumed; on occasions I have known the herbs not even be collected. Such scepticism is not confined to traditional medicine—hospital medicines are often treated as cavalierly—and a high price does not guarantee a medicine will be taken. Furthermore failure to take medicines may actually be a wise precaution. I have heard it argued that babies die because they cannot resist the medicine they are given, as can adults.

One consequence of the general scepticism is that any potential placebo effect is nullified. The resulting higher-than-usual failure rate for medicines of all kinds presumably can only increase people's doubts. Paradoxically perhaps, this seems to encourage rather than prevent a proliferation of practitioners offering new cures, especially panaceas. A few such panaceas succeed briefly in attracting patients with widely differing ailments from several hundred miles away. In other cases it is the treatment, not the practitioner, that becomes fashionable. Their eventual decline brings out wry comments from ex-patients about the profits made. The general acceptance of novelty, either as a patient or as a would-be practitioner, makes it possible for various individuals in the community to set themselves up in practice without any apprenticeship. They can buy or invent 'traditional' prescriptions, some of which may run counter to traditional 'commonsense' partly because secrecy protects them but partly too because scepticism has eroded both the old paradigm and the limits of naivety.

Characteristically the rest of the medical culture is affected too. Islamic and hospital methods of treatment are not immune to inventive entrepreneurial flair; the intellectual 'bending' of the system meets a ready response from the community. Despite government's intentions, the varieties of treatments which patients lump together under the label 'hospital medicine'—prescribed as often as not far away from a proper hospital—are a travesty of government medicine. Gross examples are injections into the eye or amateur (and fatal) excision of goitre. As a result, a further characteristic of this medical culture is for government to intervene, in pursuit of systematisation

as well as the safety of patients, and license the distribution of drugs, the right to give injections or to perform surgery, the practice of midwifery. Elsewhere in Nigeria associations of healers have been encouraged or a hospital provided for bone-setters. In short, the very lack of system brings about the enforced systematisation of medical culture.

Finally, one characteristic is in fact absent, though it might have been predicted had there been a state of Durkheimian anomie in the culture. The incidence of ill-health reportedly has not increased in the segment of the culture most affected by the de-systematisation of traditional medicine. If anything, compared with the rest of the community they are better off, and are able to provide both shelter and cures for those 'dropping out' of the town-centred culture. The rural rate of infant and maternal mortality remains high but as hospital medicine is popularly thought to have introduced new illnesses into the community (and indeed the regular epidemics of cerebro-spinal meningitis and cholera affect the towns more than the countryside), on balance people still see the countryside as enjoying 'rude health'.

In short, I am suggesting here that the origin of 'not-knowing' lies in the break-up of traditional medicine as a system; and from this not-knowing there has developed first, a secrecy which tries to conceal the lack of knowledge and certainty; and second, a scepticism in which people suspect that no one really 'knows', that there is no system. But the social conventions of politeness—as well as people's real need to find a cure for their ills—keep the veils of secrecy and scepticism sufficiently in place, for themselves and for others. Thus, visitors, on the look-out for systems, are easily misled.

CONCLUSIONS

It is easy for the visitor to take implicitly the doctor's point of view, describe his method of treatment as a system, and so, by repeating the process, end up with a set of alternative systems to analyse. But what may seem to the outsider a Babel of different medical ideas is to the insider an adequately homogeneous means of coping with illness in all its forms. What I have tried to show here is that patients do not see the doctors' different systems as 'alternatives'; furthermore, some of the doctors do not act as part of a system. Instead there is a whole medical culture within which the various systems or non-systems have affected each other over time, to the extent that a segment of the medical culture can flourish in seeming anarchy. The clue to why this can be so lies in part in people not knowing and not wishing to know; and therefore I suggest that people's disinterest in medicine is an important medical phenomenon. Not merely are the 'don't knows' significant, but also, behind many a pat, right answer, I suspect lies a 'don't care'.

In the analysis of 'alternative systems', then, I am suggesting that people in practice do not so much 'switch codes' as simply switch off. An analogy may make this clearer. A passenger on a Malumfashi lorry knows where he wants to go, but he does not know (nor want to know) anything about engines, highway codes, maps. And when he walks the final stretch

home or uses a donkey to carry his loads, he is not 'switching codes'. Indeed (to his father's disgust) he may be as ignorant about donkeys as he is about lorries. People do not, in my experience, face intellectual problems in embarking on the appropriate method of treatment (or travel)—there are many more pressing, practical problems to cope with.

If my suggestion is correct, at least two further implications arise from it. First, how common is the phenomenon I have described for the Malumfashi area? Would some other ethnographies, if re-looked at in a different light, reveal a similarly extensive 'not-knowing', or a similar breakdown of one (yet still flourishing) system within a whole medical culture? Second, have the planners of health services been misled into thinking solely of differing systems and how to match new ideas with old ones? Do the differences between 'systems' really matter to patients and their kin—or does something else (like effectiveness, or kindness and concern) matter more?

Finally, I would stress that I do not see the situation as anything more than transitory. Although I do not know for how long there has been relative anarchy in traditional medicine (it may well have been longer than the 60 years of colonial rule and men's memories), the present situation as I have described it seems inherently unstable, with only a part of the population affected. It is probable that out of the wider medical culture one dominant system will eventually emerge, through government impetus and representing a compromise, while the knowledge associated with it will be spread in primary and secondary schools. The 'don't knows' will then have their ready answers again.

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3. Putative because what we assume to have been a Hausa medical system may itself have been more a medical culture composed of competing systems derived from distinct cultural groups. Throughout the 19th century, despite attempts at reform, traditional medicine remained dominant at a popular level and distinct from Islamic medicine.
4. Smith M. G. *Corporations and Society*, p. 100. Duckworth, London, 1974.
5. These terms denote general practitioners in contrast to the technical specialists discussed in the next paragraph. *Boka*: 'healer'; *mai magani*: 'master of medicine'; *mai Danko*, *mai BaGwari*: 'master of Danko' (a particularly fearsome spirit), 'master of the Gwari (spirit)'—*Gwari* being non-Muslims south of Hausaland; *Sarkin Mayyu*: 'king of witches'.
6. Though Hausa medical terminology may become systematised by being reduced to writing again (for it occurs in Arabic script earlier), it may not necessarily catch on. Folk medical vocabularies can survive unsystematised in literate cultures too; conversely highly systematised vocabularies exist in some non-literate societies (or so we are told).
7. Last M. Strategies against time. *Sociol. Hlth Illness* 1, 306–317, 1979. An interesting factor causing slippage in meaning has been described by my colleague, Dr Bawuro Barkindo. He has known medicine sellers extend normally specific illness terms to cover arbitrarily a wider range of symptoms in order more easily to sell off a specific remedy.

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V. MEDICAL CULTURE AND PRACTICE

"There are nowadays professors of philosophy, but not philosophers," wrote Henry Thoreau as he sat alone by Walden pool. "To be a philosopher is not merely to have suitable thoughts, nor even to found a school... It is to solve some of the problems of life, not only theoretically, but practically" [Walden, p. 19].

Such thoughts were seldom far from the participants in the Conference. Pain and suffering may be invaluable aids in the task of exposing the quick of a peoples' culture, but to the investigator as a human being, they cry out for relief. So how can the insights made by students of medical culture be translated into usable forms, fit to improve the delivery of health, able to bridge what in her paper in this section Dr MacCormack calls the 'disconcerting gap' that yawns between 'sensitive studies of indigenous systems of health and illness on the one hand and national health planning on the other'? Practitioners face sick individuals and the presence of patients may soon dissolve interest in intellectual constructions unless this question about their utility can be answered: this point was stressed repeatedly during the Conference. The doubly qualified anthropologist and doctor Cecil Helman stated bluntly in his critique, reproduced below, that for him this was the central theme.

It is an important test, for in this section we begin to see whether a credible, practical alternative exists to the prescriptions of, on the one hand, 'modernisation theory' propounding the uncomplicated primacy of 'real' (technological, Western) medicine and on the other its obverse, reified 'traditional medicine'—packaged, salaried and rubber-stamped by Government.

Elizabeth Feierman faces the issue squarely from her clinic. She argues that indeed an alternative strategy to that of the 'modernisation' and 'traditional' schools can be both described and made to work. In proposing this, she makes it clear that this programme is not an agenda of conflict with Western medicine—she does not share Illich's sweeping condemnation of it; rather she sees that 'an offering of good medicine' has not been made in Tanzania; fleeting encounters in a bush dispensary is a travesty of what Western medicine could and should contribute in her scheme.

This view is shared by others. Dick Blom writes from his experience as medical officer-in-charge of a bush hospital and now as a researcher in social medicine. He explains how present medical statistics inhibit the offering of good medicine because the practitioner is too often unable to assess his own impact. He therefore proposes a simple and workable statistic to provide 'hard' data to accompany the 'soft' ethnographic data which both Feierman and Helman ask of the scholar. 'Hard' data contextualises medical practice; 'soft' data explains the relationship of practitioner and patient. Masamba ma Mpolo favours the same mixture for psychiatric practice. Employing the Freudian idiom, he presents bewitchment as a diagnosis of imbalance in the patient's individual and social spheres and argues for a type of therapy which liberates the individual in such a predicament.

It is scarcely unusual that a psychologist is much exercised by the relationship between therapist and patient; nor is it surprising to find that Blom, Feierman and Helman place great stress upon the need to foster a common consciousness of the field of affliction between doctor and patient. However, what is striking as a common feature among all these papers is the degree to which a clear understanding of any patient-practitioner relationship is seen to be inseparable from—because modified by—an understanding of relations between practitioners in an arena of medical pluralism. This has a practical and an intellectual consequence.

This latter Helman indicates when he notes the danger of stereotyping the patient in this environment as an 'endless theoriser'. That would be the result of placing too much weight in the analysis upon the patient-practitioner axis in isolation. We need to be able to see the full range of, for example, theories of causation, for which awareness and study of the extended field provides conceptual preparation. But Helman and MacCormack in this section share with Steven Feierman and Last in Section IV the worry that without the constraining hand of reality upon his shoulder, the theoriser can easily, perhaps grossly, overdetermine the intellectual component in the patient's choices. And understanding these choices matters, for that understanding must register in the design of health systems. This is the practical consequence of the extended field of common consciousness here proposed.

Carol MacCormack's 'bottom-up' planning is not a simple inversion of the dynamic from active practitioner to passive patient; its driving force is to acknowledge the presence of those practitioners with what she called during the conference 'traditional legitimacy in the sense that Max Weber very correctly used it'. This careful qualification of her terms underscores the danger which radiates from the word 'traditional' in casual usage. She, Feierman and Masamba ma Mpolo all require us to see the ranges of patients' expectations, and this the extended field of patient-practitioner/practitioner-practitioner can permit. They require it so that we may begin to talk about the coordination of resources sensibly, an exercise with an overt political perspective, as MacCormack rightly says. By the assumption of an ideologically untinted Western component, the 'modernisers' and 'traditionalists' wrench it out of the context of its political economy. This cannot be done without grave consequences: 'Top-down planning is "often culturally inappropriate at the local level, will not work as intended, and be largely a waste of the limited resources for health that the country has".'

Helman ends his comments by wondering whether we have yet achieved the full elaboration of the practical consequences which flowed from the Conference. It would be amazing if we had. This section, then, is a pointer only, a pointer towards the next and final stage of the *Medicine and Society* project which will take precisely these matters of application to be its main concern.

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V (a) PRACTITIONERS' VIEWS

OBJECTIVE INDICATORS OF HEALTH IN WESTERN ZAMBIA

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Abstract—In this paper a short introduction is given to the general topic of health and health related indicators, emphasizing the need and the difficulty to construct indicators which are appropriate for specific situations and specific questions.

The non-existence of vital statistics in most Third World rural areas is then discussed, with comment on some solutions proposed to generate health indicators from defective data.

It is argued that the problem becomes more urgent with the growing attention for primary health care programmes. A new indicator is then introduced, called the *Survival Index*, which is basically the relation between gravidity number and number of children alive. This indicator is illustrated with some preliminary data.

The possible uses and restrictions are discussed and indications are given for further research needed for development of this indicator or related types.

INTRODUCTION

When speaking about health indicators, why and how to use them, one word comes into my mind which denotes in my opinion most appropriately their intended use: *monitoring*. What are we doing and what are the effects of our work in terms of increased health and well-being of the population we serve—or is there a negative outcome?

This monitoring can be done on a national or regional level and that is the use most commonly made of the best known type of health indicators: *mortality* and *morbidity indices*, derived from vital statistics and disease registers. These also serve for the monitoring of trends over the years, as introduced first in Britain by William Farr more than a century ago.

Since then a broad variety of health and health related indicators have been developed, based on vital statistics, registries, surveys and censuses, more or less complex, and covering a fairly comprehensive number of health-related issues. And all this information gathering aims for a more solid basis on which priorities in the development of health services and specific health programmes can be based on the one hand, and with which, on the other hand, the output of these services and programmes can be monitored.

I do not wish to go into great detail on the methodology and specific pitfalls in this field, but only point out some general problems [1, 2].

HEALTH INFORMATION DATA COLLECTION

As mentioned before the most commonly used method is the construction of indices from summarized vital statistics and disease registers. These give the possibility of monitoring trends over time, but the main weakness of this approach is its rigidity. Possible answers are often restricted to questions under consideration at the time of development of the system.

Another source of information often used is measuring output in terms of volume and type of health services offered to, and taken up by the people [3]. This, however, is totally unjustified as these give an input indication rather than one of output. To this approach is related the question of the difference between needs and demands and relation of each to health. Furthermore, there are many different reasons why and how hospital populations differ from the general population and why this difference is not even stable, neither between hospitals, nor within hospitals over time.

Quite a different approach is formed by *ad hoc* survey methods based on samples, or total populations. Specific answers may be obtained here, but very often the methods are costly. For monitoring purposes they need to be repeated and therefore require considerable time and manpower.

In view of these problems it is understandable that many health workers have had the common experience that:

"The information you want, you do not have;
The information you have, you do not need;
The information you need, you cannot get."

THE THIRD WORLD SITUATION

Here the problems are even worse than in developed countries. Firstly, because of the non-existence of vital statistics in most rural areas—and I am afraid those of the urban areas are often incomplete and not very reliable. Secondly, because there are usually neither money nor competent people for surveys. And thirdly, hospital statistics, apart from their inherent limitations, are even less reliable, because they often have to be completed by incompetent and/or over-worked staff. (They even might be faked in order to make them appear to be complete.) In view of all this, one should not be surprised to find official statistics

indicating a certain trend in the prevalence of one or other disease, while field workers' experiences indicate quite the opposite trend.

In my opinion, the relation between hospital populations and the general population is so uncertain that methods devised for correction of the data to allow for the difference [4] are only giving the figures a semblance of precision.

THE MOVE TOWARDS PRIMARY HEALTH CARE

In the past Western (or Western-looking) medical procedures programmes and services have been introduced in most Third World countries, without knowing whether this was good for the health of the people, or to what extent it was good, and what were the bad effects, if any. At present we still do not know; in fact there are many contradicting opinions on the balance of good and bad effects.

Now a different approach is advocated by the World Health Organization: the move towards Primary Health Care. It is quite possible that again health care programmes are developed and implemented in the belief that this must be good for the people, because we believe it has to be good for them, and lack the imagination to see the possible bad effects.

Therefore it seems that there is an urgent need for indicators which give us, also in rural areas, reliable information about the health situation in an area before and after the implementation of new health care programmes. As many primary health care programmes are directed toward the high levels of infant and child mortality, indicators to be used need specific information on survival of children. How do we get this information in the absence of vital statistics? Well, we might ask the mothers!

FIELD OF STUDY

Senanga District Hospital is a small (134-bed), rural hospital in one of the districts of the Western Province of Zambia. It is the only hospital in a district of about 50,000 km² (somewhat more than the size of the Netherlands), with an estimated population of 100,000. It is situated 7 km from Senanga township, the district headquarters, in the centre of one of the more densely populated areas of the district (20–30 inhabitants/km²). There are only dirt roads in the district and transport is a serious problem. The distance to the provincial capital, Mongu, is 100 km (dirt road). There is a general hospital with limited specialist services in Mongu. The main tribe in the Western Province is the Malozi (the Lozi-people); their language (Silozi) is lingua franca for the whole of the province and somewhat beyond.

Intermingled with the Malozi are some smaller tribes and scattered villages of Mbunda, a tribe originating from the West (Angola), having migrated to Bulozhi (the land of the Lozi) in several waves throughout the last century.

Senanga is situated on the banks of the Zambezi river, the main artery of Bulozhi; the Floodplain of this river and its side arms form the characteristic habitat of the Lozi people, while the smaller tribes are living

along the smaller streams in the bush, or near dambo's (small lakes).

The means of living of most people is subsistence farming and at the river, fishing, of course. Main staple foods are maize and cassava, while most Lozi own some cattle, herded on the fertile soils of the Floodplain. Generally speaking, health conditions of the Lozi are somewhat better than of the Mbunda and smaller tribes. In my opinion this is due to better hygienic conditions (living nearer to the river) and a better diet (fish more abundant).

The main diseases are: nutritional problems of the (weaning) children (average breastfeeding time: 1½–2 years, problems arise as the following child is born); worm infestation (hookworm very common, most other intestinal worms are found as well); schistosomiasis, malaria, pulmonary tuberculosis, leprosy and measles.

THE SURVIVAL INDEX—METHOD

During my stay as a medical officer in Senanga District Hospital, Western Province, Zambia from June 1973 up to June 1976, I noticed that among all hospital registrations, those made in the Maternity Record Book were by far the most accurate. Being at that time very interested in the functioning and effectiveness of the Antenatal Clinics which were held twice weekly at the hospital, I started to extract these maternity record data in order to preserve them for more detailed analysis later.

It soon became clear to me that comparing the obstetrical data for that group of women delivering in the hospital after visiting an Antenatal Clinic at least once, with those of women who had not, would not permit a conclusion about the effect of the work of the Antenatal Clinics. This was because of the differences between both groups. For instance, the latter group included women from far away who only delivered in the hospital because something serious had happened, like obstructed labour; then there were probably differences in socio-economic background, age distribution, medical care, customs and food availability. Nevertheless I continued searching the maternity records looking for an indicator of the results of my work.

When I was able to look again at the material which I brought with me from Senanga I was struck by the existence of evidence about the number of children still alive per women, while also her gravidity number was known. The difference between the two numbers, I thought, might be representing a rather crude indicator of the sum total of very different causes of death (abortion, stillbirth, neonatal death, infant death, etc.) but also probably a fairly reliable description of a general situation. This assumes that a women usually knows the total number of her pregnancies and is definitely aware of the number of her own children still alive at that time. Of course care has to be taken that adopted or related children are not included.

The Survival Index is constructed by calculating for each group of women with the same gravidity number, their mean number of children alive. Therefore the Survival Index is basically the relation between gravidity number and mean number of children alive.

Table 1. Survival index of deliveries at Senanga Hospital

Number of present gravidity	Period: June 1973-Dec. 1974			Period: Jan. 1975-May 1976		
	Number of women	Number of children alive	Mean number of children alive	Number of women	Number of children alive	Mean number of children alive
1	111	—	—	119	—	—
2	87	68	0.8	71	64	0.9
3	56	88	1.6	64	111	1.7
4	58	139	2.4	59	139	2.4
5	49	146	3.0	53	171	3.2
6	38	149	3.9	49	215	4.4
7	86	442	5.1	70	432	6.2
(or more)						
Total	485	1032		485	1132	

My hypothesis is that this relation reflects the survival rate of products of conception in a given population during a period of time. This might be useful as a simple, easily obtained and fairly reliable health indicator in a developing country. One would expect it to be higher when more of those conceived survive the threats of abortion, stillbirth, infant and childhood mortality.

SURVIVAL INDEX—PRELIMINARY DATA

The method has been applied to the maternity data of Senanga Hospital as a first try. The results are given in Table 1.

There is a tendency for the mean number of children to increase from the first to the second period. The differences while generally not significant might be related to a difference between the two periods with regard to the Antenatal Clinic attendance rate. In the first period about 50% of the women attended a Clinic at least once, compared to about 75% of the women in the second period.

In the same period a Dutch sociologist, Mrs N. v/d Lans [5] conducted a survey amongst women in a group of villages in Lui-Namabunga, some 25 km from the Hospital and a control group of women visiting the Hospital Antenatal and Under-Fives Clinics and her material included also gravidity numbers and numbers of children alive. These are shown in Table 2.

Both these tables should only be regarded as an illustration of the calculation method and do not permit conclusions as to the health status of the population for various reasons (not representative and/or small numbers).

DISCUSSION

Health care programmes, in my opinion, should not be handled as isolated, theoretical concepts, but need to be based on much prior knowledge of the people they are meant to serve. In the same way, health indicators which should monitor the effects of health care programmes cannot be regarded as neutral figures. To get reliable information one ought to know, for instance, if there is any taboo on giving information about one's children or other reasons why the answers one gets might not be reliable. *A priori* I think the survey should be done by local people, using the local language (and who might warn you if your methods or questions are not appropriate).

As to the Survival Index, there are some methodological aspects one should be aware of, especially when comparing different groups. Firstly, one should have information on any relevant aspect to what extent the groups are similar or not (age distribution, tribal differences, socio-economic level, education, etc.)

Table 2. Survival index of Senanga clinic compared to Lui-Namabunga

Number of present gravidity (A/C) or next (U/S)	Senanga Clinic Group			Lui-Namabunga Group		
	Number of women	Number of children alive	Mean number of children alive	Number of women	Number of children alive	Mean number of children alive
1	42	—	—	—	—	—
2	43	33	0.8	3	3	1.0
3	41	60	1.5	7	9	1.3
4	27	52	1.9	20	48	2.4
5	22	72	3.3	10	29	2.9
6	22	86	3.9	19	71	3.7
7	51	279	5.5	22	101	4.6
(or more)						
Total	248	582		81	261	

Secondly, there is the problem that dead cannot speak. Therefore information on children of women who died cannot be incorporated in the index. Particularly the mortality of young children can be expected to be high if the mother dies. In this respect the Survival Index will give too rosy a view of reality.

Thirdly, the figures given in this paper include some (probably not all) gravities ending in abortion. It might be better to exclude abortions, by modifying the question as to the number of pregnancies (only the birth of a recognizable child, dead or alive) because of the unreliability of abortion data.

CONCLUSIONS

In my opinion there is a need for objective health indicators in view of the growing emphasis on primary health care programmes which are appropriate for the specific situations in the Third World (rural) areas.

Existing health indicators cannot give reliable information in these circumstances.

When used with care and embedded in relevant prior information about the study population, the Survival Index, as described in this paper, might be useful as an objective health indicator in a developing country.

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ALTERNATIVE MEDICAL SERVICES IN RURAL TANZANIA: A PHYSICIAN'S VIEW

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Abstract—A physician evaluating health status among rural Tanzanian children as well as working in a Lutheran hospital, evaluates use of traditional and hospital-based medical care in the Usambara Mountains. Most rural Tanzanians use both traditional and hospital-based services, even for one disease episode. Local attendance at the Maternal and Child Health Clinic (MCHC) is increasing. 82% of the eligible children of the village attend. Of those who are eligible but do not attend, most have a sibling who had attended the clinic. Poor relations between hospital-based and traditional practitioners increase villagers' discomfort at attending the hospital or clinic, including the MCHC. Relations can be bettered by:

- (a) having both MCH aides and village women discuss problems at the village health committee;
- (b) encouraging traditional healers to participate fully on the committee and be trained to hold village health posts;
- (c) encouraging women to attend the clinic and eliminating the disparagement of traditional medicines in all clinics.

INTRODUCTION

A physician providing primary care in rural Tanzania most frequently works from a hospital complex. The physician is then part of the establishment of clinical medicine which preserves tensions between itself and the traditional healers. Hospital practice is barely compatible with community health efforts. The physician is immersed in emergencies, teaching rounds, paperwork and separated even from the patient by sterile barriers. A physician-researcher has the opportunity to separate herself from the hospital grounds and participate in the normal life of the community. This entails hearing complaints about the hospital: "The doctor never listens. I just get a shot whenever I go to the clinic." Or, "they yelled at me in the clinic because the baby isn't growing well. Will you come with me next time so that I don't get a hard time?" These complaints were received while weighing, measuring, and examining children and teaching two villagers to continue a basic health post in the future. These complaints are not native to rural African locations. Western medicine is viewed similarly in America and in Tanzania. But Tanzanian women dissatisfied with treatment at the dispensary have the more familiar traditional doctor to visit. Most people visited both types of doctors. Which doctor they chose and in which order was not the determining factor in the health of the child.

The therapies and preventive services offered to the people of Galambo can be easily separated into traditional (Swahili *dawa ya kienyeji*, Shambaa *dawa ya kienyezi*) and hospital-based (Swahili *dawa ya kitaalamu*, medicine of education, preferred or *dawa ya kizungu*, European medicine).

TRADITIONAL MEDICINE

Traditional medicine is a wide field including local plants used by the family or friends without invoking any supernatural powers, doctors such as herbalists

or specialists in spirit possession, sorcery, or preventive medicines for diseases such as *mshango wa degede*, causing twitching and convulsions in babies and young children.

Practitioners of traditional medicine live in the village. In Galambo there are 5 full-time practitioners, compared to no hospital-based representative. Another traditional healer lives in Galambo but practices in Dar es Salaam exclusively. Fee schedules are cheaper than at the local mission hospital, which charges T. 6/- (6 Tanzanian shillings about 75¢) for each outpatient visit, with reduced fees for a series of injections. Government services are free. If a patient is unable to pay, a traditional healer treats anyway. Treatment frequently takes many days, with daily visit of the doctor to the patient's home, or by the doctor-patient pair to surrounding streams, caves and vegetation. Success or failure of the treatment is known to relatives and neighbors as well as the physician. This service, a general first or second treatment for an acute disease, performed by a talented friend or relative with training, at home or in familiar surroundings, is an attractive alternative in any medical system. Patients in America fondly remember the days when such services were common. These traditional doctors frequently refer patients to the hospital if they suspect a disease susceptible to hospital-based medicine, or if their treatment fails.

HOSPITAL-BASED MEDICINE

Hospital-based medicine (*dawa ya kitaalamu*, medicine of advanced education) is provided by government dispensaries, MCH clinics, health centers and hospitals, and by voluntary agencies. These are both preventive and curative services. Health services offered to Tanzanians have increased greatly since Independence. In 1960 there were 100 hospitals and 942 dispensaries [1]. In 1978, there were 50 more hospitals, 2205 dispensaries and 194 health centers [2].

MCH clinics now offer preventive services of immunization, weight surveillance, nutritional counselling and food supplementation to the undernourished and prenatal care. The clinics reach about 80% of the pregnant women and 60-80% of the under fives. These gains are astonishing. The clinic is well summarized by Dr David Morley in the "Spread of Comprehensive Care Through the Under Fives' Clinics" [3]. His plan has been adopted in Tanzania and in the short time since its institution has reached well over half the children. The MCHC together with piped water which is now available in the majority of villages has been a great medical advance. Within the past year, progress has been made in requiring building of a latrine for every household. In summary, clean water, sanitation and nutrition advice and immunization are becoming available to all.

Despite this tremendous growth in preventive and curative services, the clinics and dispensaries are overburdened. Hundreds of people may wait at the dispensary for one rural medical aide. The average dispensary outpatient visit is 1-2 minutes [4]. Despite overcrowding, the dispensary is used by the villagers and the success rate is high. The majority of patients are satisfied with the treatment they receive. Patients evaluated to have received correct treatment by a government investigating team constitute 86% and those satisfied with the treatment, 97% [4, p. 115]. The villagers have shared in the building of most dispensaries and homes for the rural medical aides who run them. Almost all villages want their own dispensary.

RELATIONS BETWEEN TRADITIONAL AND HOSPITAL-BASED MEDICINES

The relations between the hospital-based institutions, including dispensaries, health centers and clinics and traditional medical institutions are very different on the central and local levels. The Tanzanian Government is well aware of the problems and benefits of local traditional medicines. A Traditional Medicine Unit is functioning as part of Muhimbili Hospital, the teaching hospital in Dar es Salaam, for investigation of plants used in traditional medicine. They are also interested in furthering relations between the hospital-based *dawa ya kitaalamu* and traditional *dawa ya kienyeji*.

The official policy is wisely one of encouraging conciliation and understanding between traditional doctors and their hospital based counterparts, but relations between them in the rural areas are either non-existent or tense. The reasons for the conflicts cannot be discussed thoroughly here. Briefly, the conflicts are due to the fact that medicine as it was imported from Germany and England in the late nineteenth and twentieth centuries was the only legitimate therapeutic course in those countries. The European missionary doctors were not used to competing with the majority of traditional healers who were physically indistinguishable to the European from the patients they were treating. Another cause for dissension is that most of the physicians and nurses of the colonial era were missionaries or other ardent Christians. They could not accept as medicine practices they considered 'heathen'. Some of these attitudes

continue today. We physicians are not always broad-minded; we always think that our kind of medicine is best. And physicians, working out of clinics and hospitals where they had more than enough business, hardly had time to go to the homes of their patients and learn what patterns there were in seeking medical care. A century after the German missionaries tried to discourage local traditional medical care it remains extremely strong in Tanzania.

The government has good methods for minimizing tension between hospital-based MCH clinics and women who are more familiar with traditional doctors and local languages. This is done by training for 18 months women who have completed Standard 7 (7th grade). They become MCH aides and are expected to return to their home districts to offer clinic services to their relatives and neighbors in a combination of Kiswahili, the lingua franca and their local language. The women wisely use the clinic situation to teach Kiswahili; but often use it exclusively in all clinic dealings. Many of the older women do not speak it well, although all understand it and are learning to use Kiswahili in adult education programs. Because of reluctance to speak the language, many village women feel alienated in the clinic and feel talked at, but not participants. A representative of the MCHC is expected to participate on the village health committee, but when a central MCH serves a large number of villages, as does the MCH of Bumbuli Hospital, this cannot happen. If the MCH aide or nurse would participate in village health affairs with the women of the village, the interaction within the clinic situation would reduce the authoritarian image of the clinic.

The tension is obvious to the villagers. In Galambo, only very recently did the missionary doctors and nurses at the nearest Lutheran hospital stop cutting off the amulets children wore to ward off *mshango wa degedege*. The response of both traditional doctors and mothers to this practice was to have the mother wear the amulets in her clothes rather than show them on the baby's wrist. A study in 1970 revealed that 70% of all children attending the Bumbuli MCH clinic wore "some kind of amulet or charm bought by the mothers from African healers with the intention of protecting the child from disease" [5]. The users of this medicine are greater in number in 1980, although the visible charms are fewer. Despite this problem, clinic attendance has grown over the past ten years. The surveys of Kreysler (1970) and the author (1980) were done in Bumbuli, a 15-minute walk from the clinic, and Galambo, a 1-hour walk from the clinic, respectively. Attendance from Bumbuli should be higher than attendance from Galambo. In 1970, 57% of the mothers of Bumbuli attended the clinic. In 1980, 82% of the mothers of Galambo attended with their eligible children. Patterns of clinic attendance will be discussed later. Some of these problems may be more severe at a mission clinic since many traditional practices are still considered anti-Christian. In summary, however, women are taking their children to the clinic.

Other tensions between doctors and traditional doctors exhibit themselves at night, when parents unhappy with the hospital treatment, but afraid or unwilling to leave, will request the services of a

traditional doctor. They will usually take the patient to one of the rooms in the hospital complex reserved for patients' families. There the child will be treated, and much to the amazement of the hospital staff, may exhibit himself much better or worse the next morning.

The staff of the hospital tends to blame every death on intervention by traditional healers. Preterminal gastric bleeding, resulting in vomiting black fluid, is usually shown as proof that the child had ingested some local medicine. Physicians in the hospital are furious at these unscheduled changes in therapy, but they are routine to the traditional doctors who only say that they would prefer to be invited to the hospital in the daytime. These midnight calls are exhausting. In a few hospitals in Tanzania, there are established wards with co-treatment by Western and traditional healers.

Unpleasantness can also arise when the child comes to the hospital late in the course of the disease. The amulets are frequently claimed as evidence that the child has recently been to the *mganga*—traditional healer. Parents are accused of delaying in seeking medical care. Of the two children associated with Galambo who died in the hospital (one not living there but with a father living in Galambo; the other living there), neither child, although arriving late in the course of the illness, had been to an *mganga*. One had completed a 5-day course of penicillin injections at an outlying dispensary—inadequate treatment for her meningitis. The other had received no previous medical care.

Despite the tensions between practitioners of the two opposing medicines, which may result in lowering MCHC attendance, there is general medical agreement that better preventive care is essential to improved child health in Tanzania.

With an infant mortality rate of 152/1000 and an under-fives mortality rate as high as 286/1000, it is obvious how great a need there is for better child health care. Many of the deaths are caused or contributed to by malnutrition and other preventable diseases. The health of the children is directly linked to that of the mother and the ability to take care for her children at home [2, p. 33].

Although curative services are necessary in all countries, the main impact in quality of life, infant and child mortality and general health of the population comes from preventive services. In Tanzania, the Ministry of Health works closely with the Tanzania Food and Nutrition Center providing these services. The most common causes of hospital death in Tanzania are: measles, parasitic and infectious diseases including malaria, respiratory diseases and digestive tract diseases. Curative services can have only a minimal impact on these diseases. As has already been mentioned, 82% of the under-fives in Galambo attended the MCHC. What of the other 18%? Surprisingly, many of the mothers had taken previous children to the MCHC but are not taking the present under five. Very few mothers refuse to go altogether. When asked why they are not taking this child to the MCHC, mothers say that it is the attitude of the clinic, holding them responsible for the poor growth of a child, assuming that they are preferring traditional medicines to advice about food habits, that

makes returning to the clinic unpleasant. The idea of preventive service is appreciated. Many of the children of Galambo are 'vaccinated' against *mshango wa degedege* and 82% against diphtheria, tetanus, whooping cough, polio, and measles. As was mentioned, the clinic is conducted exclusively in Kiswahili, which is understood poorly by the older women. It is the point at which a child stops growing well, especially if the mother has no close relatives to support her quest for therapy, that frequently the child will be taken away from the clinic. Women feel reprimanded if their child is small, weak, growing poorly, or near or below the 60th percentile (of median height expected on the Standard Growth Curve). But if the women feels helpless in improving the child's condition because of deprived home conditions, she has no choice but to keep her self-respect and stop taking the child to the clinic. These are the children, for whom the clinic being free and an expected medical choice, may have no other medical contact—traditional or hospital-based—and are at the highest risk for deficiency diseases.

The child's attendance at the MCHC is of primary importance, and relations between the therapies are necessary to insure that children continue to attend. In general, attendance at the MCHC, and leaving hospital-based medicine as an option rather than choosing the hospital as a primary medical source, is a good development. Given good nutrition, clean water, good hygiene and complete immunizations, all of which are possible to achieve, it makes little statistical difference whether the child attends the hospital first in the course of an illness or goes to the traditional doctor. A very small number of medical emergencies need appropriate hospital medicine urgently—e.g. cerebral malaria and meningitis. In this small minority of cases, urgent hospital care is a matter of life and death. But treating every patient as though they need hospital curative services is a mistake. The MCHC is a representative of the hospital system. At a previous visit, if a person has been made to feel in the wrong for visiting a traditional doctor before the clinic, the patient may not return to the hospital system—including the MCHC. The general health care of a country would be little affected if somebody leaves the hospital or attends a traditional doctor during a hospital stay. Some deaths and suffering are eliminated by swift hospital attention. But most disease, e.g. parasites such as malaria or worms, pneumonia exacerbated by roundworm migration, debilitating diarrhea, might have been eliminated entirely by preventive care. Nutrition, water, sanitation, and immunization are the basic determinants of the country's health. In the U.S., TB and rheumatic fever death rates declined well before the advent of antimicrobials for their treatment. In Tanzania, it is the same preventive measures that will best protect its population and the government is instituting these changes rapidly.

Where does the hospital-based practitioner stand in the choice of a doctor? Rural Tanzanians, like rural and urban Americans go quite often to the hospital-based physician—complaining all the while. Most of the human relations problems are identical: in Tanzania they say, "There are so many people at the clinic. I hardly got a chance to open my mouth and explain

what was wrong when he told me to go and get a penicillin shot." "The doctor didn't tell me what was wrong. He just told me to take these pills. I still don't know what they are." Or, "I went to the doctor and got yelled at for going first to the *mganga*." In the United States, the situation is hardly different. As in Tanzania, there are times when the doctor doesn't speak the language well. Sometimes he/she knows it too well. I am told: "Doctors stand at the foot of the bed murmuring about circulating immune complexes and prostaglandin inhibitors." "My doctor doesn't tell me anything. I have no idea what's wrong with me." The physician has traditionally isolated him or herself from these criticisms, but has recently allowed them into the higher reaches of medicine. In 1976 the *New England Journal of Medicine* printed Norman Cousins's attack of clinical medicine after he had recently been a patient [6]. His complaints of his American treatment were similar to those heard in Tanzania. Reviewing Cousins's work, a physician wrote:

Many others have written about the impersonality of medical care, the failure of physicians to listen, and the exclusion of the patient from effective participation in his own care, and the significance of faith, hope, and personal investment for the healing process... And that was Cousins's first and basic complaint as patient: few doctors listen to the patient and even fewer hear what the patient is trying to communicate [7].

As in the United States, people continue to seek hospital-based care, with complaints about the social relations between patient and doctor. But in Tanzania another question is also asked: are children dying because they might be taken to the traditional healer first?

The children who die are not those who have chosen the wrong kind of doctor. They are those who have received no medical care. They are those children who fall between the cracks of society's categories, and are not covered by a therapy managing group's responsibility. Mother and child alone constitute this group and it is inadequate. Three kinds of activities would constitute necessary health care for mother and child:

(a) Immunization at the MCHC and monthly attendance for weighing and nutritional advice. Food supplements are sometimes available for the malnourished child.

(b) Seeking traditional help against local disease. This is often done before attending the MCHC and in no way affects the future attendance of the child at the clinic. The same people who attend the MCHC regularly and try to apply new nutrition policies will also have their children guarded against local diseases. Small children, as has been mentioned, were always immunized for *mshango wa degedege* whether they were Christian or Muslim.

(c) Seeking therapy during an illness. This may include asking neighbors to gather and cook up roots, going to one or more traditional healers or attending MCHC, hospital, or dispensary outpatient departments.

Only one child from Galambo died during the last year. This may represent an improvement in child

mortality statistics. The 1967 census reveals child mortality of 286/1000. Mortality for children under 4 years in Lushoto District was calculated by Kreysler and Mndeme in 1970 and stated to be 17.4% [8]. A national census done in 1978 is now being tabulated. The one death was a child for whom no medical care of any kind was sought despite her desperate condition. There were no new amulets or cut marks from recent medicine administration. The villagers had not heard of her receiving any medical attention. The mother appeared at one of the author's weighing clinics with the child, a girl about 6 years of age weighing 20 pounds. She was too weak to walk and had been so for about 2 months before coming to me. Her mother requested some cough medicine. The child was febrile to 101°F, severely anemic, and with no normal breath sounds from her lungs. Liver and spleen were enlarged. Her body was severely marasmic but there was no edema or dermatitis. She was brought to the hospital under great pressure from neighbors. She had probable TB as well as malaria, pneumonia, hookworm, roundworm, and anemia. An elder brother promised to donate blood, but did not. Neighbors appeared with food when possible, but there may have been some days when mother and child went hungry while at the hospital. The child died after seeming to recover for a few days.

The attitude of the nurses was that the child had little chance (which was true) and that because the child had been sick at home for so long, she had obviously been treated with local medicines when she should have been at the hospital. The tragedy is not only that this was untrue, but that the mother had been unable herself to seek any medical help. She only sought hospital treatment under pressure, and when she knew she would be under the protection of a physician-acquaintance. The mother is one of the women for whom the search for health is lonely, without a support group, and too difficult both to initiate and maintain. It was not the wrong choice of medical treatment that resulted in the child's death. It was no treatment at all until too late.

Another woman was found almost by chance. Her child also had severe cough and weight loss, with red hair and swollen legs indicating kwashiorkor, the other kind of protein calorie malnutrition. This woman also lived without the help of a support group. When we suggested to her relatives, however, that the child was getting insufficient attention, the distant relatives joined and got help for the child—*jini* spirit treatment. Although she never brought the child to me for measurements, the villagers agree that his health is maintained one year after the *jini* treatment. This child had been to the clinic, but his mother was unable to continue taking him when it became obvious that he was losing weight. She felt humiliated by her inability to provide well for the child, and to have this made public. Her departure from the MCHC had been the last effort to have any medical care for the child before receiving *jini* treatment 2 years later.

One of these children had been to the clinic. One had not. One was treated in the hospital and died. One was treated for spirit disease and recovered. This is not a statistical sample, but only an illustration of a process that is clear in rural Tanzania. Those who

continue to search for therapy together with a managing group, and continually change therapies, do better than those who fare alone. It is the seeking of medical care until the desired effects are attained that results in the healthy patient, assuming adequate nutritional and hygienic measures. There are circumstances in which the late arrival at the hospital will result in death—e.g. meningitis and cerebral malaria. But when these patients come to the hospital at all it is part of the usual therapy quest that is necessary for continuing good health. Many *waganga* recognize these diseases and send them to the hospital. More can be trained to do so. In time, both patients and their traditional doctors should learn to recognize the diseases that need hospital treatment and to institute appropriate first aid, such as fluid replacement.

HOSPITAL-BASED MEDICINE AS AN IMPROVED ALTERNATIVE

The answer, then, is to make the alternative of hospital-based medicine attractive in a system that has many other attractive choices. People will choose a therapeutic system which works, and which is comfortable. The patient has simple requests which can sometimes be better answered by the *mganga*: when sick, the patient wants to get better. There is an expectation of correct treatment. Success in treatment is more than just comfort following a disease episode. A successful treatment reinforces the knowledge that the type of medicine selected was correct for that disease and will be chosen again for a similar set of symptoms.

In all systems of medicine practiced, the *mganga* or physician may elect a therapeutic trial. He may not be absolutely sure of the disease, but will try a certain known medicine. This is common practice in Western medical offices in Europe, America as well as Africa. A physician in the United States is likely to start an antibiotic such as tetracycline before knowing that a pneumonia is caused by bacteria or mycoplasma. The physician may receive a laboratory report confirming the etiology. The patient will keep him informed of progress. Follow-up X-rays and appointments are likely.

In Tanzania, the dispensary rural medical aide may be facing several hundred patients. The patient may receive chloroquine and a series of 5 penicillin shots for a fever. Blood smears will be taken and reviewed later. The patient may not see the doctor again. If the injections and tablets fail, only the patient will know. A return visit just to check the treatment is rare. But the failure of the treatment has further ramifications. If a treatment failure is found in America, a re-examination and new therapy probably ensue. In Africa, however, not only the medicine but the whole choice of therapy may be questioned. If hospital-based medicine, *dawa ya kitaalamu*, does not work, it is then because the disease is caused by *jini* spirit, a sorcerer, or because the patient has received inadequate treatment. If the illness is not attributable to hospital-based etiology or medicine, and cannot be cured by the hospital, then the patient will not return to the hospital or dispensary for similar treatment next time. No decision is irreversible, however. A treatment failure may be followed by a full round of

visits to various *waganga*, only to return to the dispensary or hospital if no treatment is found. For this to happen, however, there must be an active search for therapy and cure.

The *mganga* visited early in the course of a disease is likely to be a relative or neighbor. Very little would be charged for the visit. Treatment takes several days and its course is well known to the *mganga*, patient, and probably everybody else around. The *mganga* visits the patient in his home. Most important, the decision to seek further medical care is a joint one between the *mganga* and his care group. The decision may well be to send that patient to the hospital. The traditional doctor is an important source of hospital referrals, although conversely the hospital doctor usually refers only the terminally ill and psychiatric cases to traditional doctors.

If the hospital doctor offered the patient an appraisal of treatment outcome as well as a full discussion of what is to be expected, some of the hard feelings might be alleviated. And if the doctor and patient agree that treatment has not succeeded, discussion of the next step together would be advantageous. Success may mean something different to patient and to doctor. The patient should be required to return in a specified length of time to exhibit improvement, or status quo, or worsened condition.

This mutual appraisal of the treatment outcome would increase the villager's comfort and understanding in what remains a somewhat alienating experience. The resulting good feeling of the clinic situation would transfer to a better understanding and attendance at the MCHC.

PROPOSALS

Where, given the constraints of the two major categories of medical system, can traditional and clinical doctors meet and discuss their relationship for the benefit of their mutual patients? In Tanzania, there have been several meetings of the Regional Medical Officers with representatives of the Ministry of Health and local *waganga* who chose to attend the meetings. None of the *waganga* practicing full time in Galambo attended these meetings. There is interest, but the hardship of travelling to a central town and leaving home and family for even a short duration, make these meetings difficult for most traditional family practitioners. A local solution is more desirable. 84% of Tanzanian villages have a Health Committee as part of their Village Council [4, p. 49]. Projects of the committee included daycare centers, environmental sanitation, construction of latrines and wells, primary health care, nutrition education, first aid centers, boiling water, measles campaign, etc. [4, p. 50]. The members of the health committee are the young, committed, and usually educated villagers, interested in improving village health through preventive and curative measures. These committees frequently include the rural medical aide.

The traditional doctor is frequently the primary doctor in fact, but is not officially recognized. He is frequently overlooked in the mainstream of medicine and preventive practice as it passes from Ministry of Health to Regional Medical Officer, District Medical Officer, Medical Officer, Physician, Medical Assistant,

MCH nurse and aide, Public Health Officer, Rural Medical Aide and interested villagers. Although this traditional healer has the power to influence preventive practice in the village, he is almost never consulted. These *waganga* frequently refer to the hospital, but are not, in turn, asked about medicine in their villages. Many of the *waganga* are educated and might be willing to accept village health training and subsequently health posts if the usual time problems of adult students could be resolved—leaving the family, care for farms and cattle. Although many of the *waganga* are educated, many are unable to read due to their advanced age and its accompanying presbyopia (farsightedness of old age). Increased availability of glasses would make their acceptance of such a post more likely. The planners of the Ministry of Health are anxious for the *waganga* to accept village health posts, because they are interested, trusted, and much less likely to leave for paying jobs. The first step, then, is to place the *waganga* on the village health committee and acknowledge their interest in the health community. That traditional practitioners are not usually members of the committee is due to the alleged lack of legitimacy of traditional medicine. In a government survey, 98% of the villagers who acknowledged the existence of a traditional healer admitted people go to him. But only 2% admitted personally to have gone to the traditional healer [4, p. 129].

The very rapid growth and expansion of rural health facilities in Tanzania have done much to provide medicine in these areas. Unfortunately, the goal of hospital-based health care for all has not yet been attained. Whether dependence on traditional medicine will decrease when Western medical care is available to all is questionable. Until then, however, we can be sure that it will continue to be an important

alternative in health seeking activity of the majority of the population. This calls for a legitimization of traditional village healers. This is most easily accomplished by encouraging them to participate on village health committees and to occupy village health posts. In this way the traditional doctor will continue to function as now, but will be available to learn Western medicine and teach traditional medicine.

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KINDOKI AS DIAGNOSIS AND THERAPY

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Abstract—*Kindoki* (Kongo 'bewitchment') has often been analyzed as a social phenomenon which provides an outlet for repressed hostility, frustration and anxiety; as an indicator of tense social relationships, as accusations are directed toward outside agents of the relationship; as a medium through which episodes dramatize or reinforce social norms. But the following questions need to be asked from a psychological viewpoint. Does *kindoki* reflect the individual's unconscious means of personality integration? When it is used in describing an existential condition, clinical data suggests that the individual is moving from dependency to self-affirmation and self-integration. I propose the following hypotheses which guide my therapeutic work with the bewitched. Beliefs in *kindoki* are a representation of unconscious strivings toward ego integrity. Use of *kindoki* symbolism expresses engagement in the process of individuation, of identity formation, and a means of affirmation in the context of social thought and social relationships. An individual's identity is located in the ego yet also in communal culture; *kindoki* symbolism established the separate identity of the two—social and individual—identities. It enables the individual to say 'no' to the group which is the dominant part of his personality structure. In the *kindoki* experience, the individual uses the 'group ego' against which to externalize his feelings and impulses so as to promote personal growth. *Kindoki* symbolism provides the context in which the individual discovers and actualizes himself. It is thus a unitary psycho-social phenomenon. The therapist dealing with bewitched patients should accordingly, in diagnosis, adopt an analytic approach and, in therapy, a psycho-synthetic approach so as to not only represent the wholeness of *kindoki* as a system of thought but also to facilitate the healing process.

INTRODUCTION

This presentation is an invitation to meet the African bewitched person whose struggles for personal liberation have often been ignored or misinterpreted by politicians, medical doctors, social scientists, including pastoral care specialists. This safari journey calls for an affirmation of the fact that psychotherapy and counselling have to find their roots in the cultural interpretation of illness and health.

The individual who presents personal problems in terms of bewitchment is the focus of my preoccupation for the following three main reasons.

First, the bewitched person is easily found at a shrine, modern hospital, prophet's healing clinic, traditional palaver session, in a university classroom, or at a traditional doctor's clinic. In a study of a group of Nigerian students who experienced nervous breakdowns while pursuing university education in England in 1957, Lambo found that more than 90% of the students explained the cause of their illness in the context of African traditional beliefs in bewitchment [1]. Anyone who is involved in clinical practice in Africa often hears a patient say: "Lutanda hates me and I am sick. I forgot to send part of my first pay to the elders in the village, and I am sick." The common complaints for which therapy is sought at one of the prophet's clinics in Kinshasa are connected with the fear of bewitchment, cure from illness, prosperity, birth of an interpretation of unusual deaths of children, protection of women against miscarriage due to bewitchment, protection of children against powers of bewitchment, self-accusation of bewitchment [2].

It is implicit that these experiences are lived and feelings expressed in the context of the world-view which needs to be explored and understood not only by the therapist but also by the individual who claims to be under bewitchment.

Secondly, declarations made by the bewitched person about himself and the bewitching agents shed light on the African concept of illness. As the Baluba of Central Zaire declare:

"Muntu wa mwidia Kafwalei,
Ufua fua ngua balogi ne bankina bantu" [3]
(The man of God never dies,
If he ever dies, it is so done by sorcerers and those who hate)

Bewitchment reinforces the traditional African understanding that disease, misfortune and death have supernatural causes [4]. The disfavour of the deities or the ancestors and the enmity of others in the community are two of the outside forces believed to precipitate illness. (Natural causes are also recognized.) Within the African culture concepts of health are far more social and cultural than biological [5]. The social and the cultural dimensions of the perceptions of the bewitched person should be a vital part of investigation and therapy.

Third, the negative attitude of colonial governments, Western-type services and Christian-oriented hospitals towards the bewitched person have prevented the development of a dynamic therapy for the growth of the bewitched person.

There has been a lack of incorporation of social elements such as traditional beliefs, religious practices and values, interpersonal and social structures, into the healing institutions. This has created a mechanical-medical professionalism that deals with things rather than with persons seeking health and growth. Opler once observed that:

Most colonial powers, and even missionaries, have dealt with the problem of witchcraft very ineffectively. The denial of a psychological basis for witchcraft has resulted in a superficial verbal attack on the evils of sorcery [6].

Healing professions, including psychotherapy and counselling, are therefore being challenged to take the risk of better understanding such a phenomenon as bewitchment.

THE PSYCHO-CULTURAL DYNAMICS OF BEWITCHMENT

Urbanized persons in Africa are still to a great extent possessed by spirits of ancestors who lived in traditional societies. Physical and mental illness, misfortune and death, are still commonly believed to have supernatural causes. The disfavour of the deities, the enmity of others in the community, broken interpersonal relationships, are major outside forces believed to precipitate illness. Bewitchment becomes therefore a psychocultural persecutory symbolism.

The passive-aggressive syndrome of bewitchment

Beliefs in bewitchment are functional in as much as they are used as a channel through which people can deal with hate, hostility, frustration, jealousy, anxiety, guilt and sexual fantasies which are not culturally overtly expressed.

Therapeutically, beliefs in bewitchment create social abreactions, thus preventing the formation of severe individual neurosis. This is the integrative function of beliefs in bewitchment as related to the displacement of a threat from within to the outside. This has the double effect of creating social and personal discomfort as well as social and individual therapy. In general, the individual deals more easily with external than with internal dangers. The aggression which is intended to destroy the outside serves as an unconscious means of assuring one's capacity for maturation. Aside from facilitating the discharge of aggression, in culturally accepted ways, beliefs in bewitchment serve another psychological function: they resolve ambivalent feelings which are encountered in the ambiguity of social relationships. Wittkower and Weidmann state that in peasant societies:

There is a great deal of ambiguity in interpersonal relationships which is related, on the one hand, to a view of others as being potentially hostile and unpredictable and, on the other hand, to cultural values of friendliness, generosity, co-operation and patience [7].

At the same time cultural patterns prescribe amiability in inter-personal relationships. Consequently, they tend to relate to each other on two levels at once. Their behaviour is simultaneously defensive and offensive and a person's remarks, for example, may just as easily imply negative effect as positive effect, even though they are presented as being solely positive.

When this kind of ambiguity is pervasive in a society, ambivalence is its counterpart. Ambivalence prohibits the organization of emotional forces and interferes with ego-integrative processes. There is in the condition of ambivalence an inherent disturbance in the experiencing of reality, for under such circumstances it is impossible to differentiate internal events from external ones. There is no way of testing what one has sensed as reality in the intentions of another person. Efforts to test reality essentially involve the projection of one's feeling on to another.

Therefore accusations made in bewitchment symbolisms are based on a conscious awareness of hostility, on unconscious reactions to the negative aspects of an ambivalent relationship of another person. This hypothesis does not disregard accusations directed towards another person with whom the bewitched had no previous identifiable conflict. Marwick says:

This brings to mind the 30% of cases in which no quarrel preceded attack or accusation. In these instances the blame for misfortune was laid at the door of someone who was not necessarily in a tense relationship with the victim or the accuser [8].

Kindoki: an unconscious negative reaction to suggestion

In the Kongo culture, the word of man performs to that of God. "*Mpova i Nzambi*" (the word itself is God) is a popular saying. By the word one can curse or bestow benediction. It is God incarnate in human speech. It is spirit incarnate. *Mpova*, the word, is the life giving force of the world—it produces life and sustains it.

Mpova is a powerful weapon. It brings wholeness as well as punishment, curse and destruction. Komo-Dibi expresses this truth in these terms:

The word is all.
It cuts, rubs off.
It upsets, creates anxiety.
It heals, destroys.
It exaggerates, or humbles accordingly.
It excites, calms down the soul [9].

Mpova does not only facilitate the transmission of information. It expresses reality as it is the incarnation of truth. It completes any physical and biological act performed by man. Conception, for example, is completed not only by the fertilization of the ovum by the male's sperm but also the word. Ogotomneli formulates this idea in the following terms:

The good word, as soon as it is received by the ear, goes directly to the sex organs where it rolls about the uterus just as the copper spiral rolls about the sun. That word of water brings and maintains the moisture necessary to procreation and this means Nommo brings about the penetration of the uterus by a germ of water. It transforms into a germ of the water of the word and gives it the appearance of a human person through the essence of Nommo [10].

Mpova reinforces the intention and becomes itself the action that actualizes the intention of man. It is charged with creative power. It is the energy and the life. The good word reinforces and vitalizes man in his whole being. The bad word brings illness and leads towards death.

Kindoki: a symbolic acting out of inner guilt feelings

Guilt is one of the major problems encountered by anyone involved in any type of helping relationships. Certain acts and decisions are usually followed by guilt feelings. Man, for ages, has been asking such questions as "Who is the cause of my sickness?" "How can I get rid of my physical ugliness?" Guilt feelings are acute in those who suffer from neurosis.

Beliefs in *kindoki* are deeply rooted in the religious-psychological understanding of guilt and responsibility. Observation of any traditional society reveals

an apparent lack of guilt feelings. This situation is profoundly influenced by the belief in the capacity of evil spirits or 'ancestor-presence' to possess or influence the behaviour of the individual and suggest the form of therapy to be undertaken. Let us take the case of Mafwana whom I saw in 1969 in Kinshasa. This patient, married with one child and in her late twenties, came for therapy. After she was divorced, she experienced acute anxiety neurosis. She had a repetitive dream in which her dead grandfather told her to go to the village and kill a goat for her uncles who never approved of her marriage which was not done in the traditional form. She thought that her grandfather was asking her to have a special church service for him. After a few sessions, she agreed to go to the village to do what her grandfather suggested in the dream. In the village she experienced a total catharsis and returned to Kinshasa a new person.

Mafwana's dream had a lot of psychosexual symbolisms and shows her emotional attachment to the grandfather. His masculinity and affection were the only really good experiences she had had with any man. As an adult, she was still a protected child of the grandfather, married to him emotionally. When making love with her husband, she had hallucinations of being spanked by the grandfather. This was probably a sign of disapproval of her marrying this man without going into traditional sets of behaviour. She started doubting herself as a wife until she reached her own self-discovery in the village. The punitive ethics of the grandfather who was Christian created a strong superego and a weak ego in the child which had a bearing on her adult life.

It should be noted that the individual's tendency to socialize guilt is mainly a need for support and a mechanism to affirm worth as an individual. It is evident that social interactions facilitating transference contribute a great deal to what we consider as externalization of guilt, even though there is a tendency that the group puts pressure on the individual to accept shame in order to bring to the group the individual's awareness of guilt.

Thus, even if one has to look around for someone to blame, his own efforts already provide a psychological ground for the integration and strengthening of the ego as boundaries of his own self in opposition to social selves are defined. Psychologically, *kindoki* accusations facilitate the displacement of a threat from within to the outside.

An unconscious affirmation of one's worth

Bewitchment beliefs perform a psychological function by helping the individual to deal with his personality crisis due to social control. The patient, through bewitchment symbolism is allowed to mistrust the environment in order to make claims for his own identity.

These beliefs are used as a weak man's only means of retaliation not only towards the stronger person in the same kinship, but also in forms of social, political and economic oppression.

Kluckhohn analyzed the Navaho bewitchment phenomena as a function device used in order to get people's attention and sympathy. Kluckhohn remarked that a great number of people who went into a trance attributed to an attack by bewitchment spells

at public dances were unconsciously requesting to be recognized as human beings. Out of 17 cases, Kluckhohn found that 11 were women who were provided only with a few channels for social recognition and 13 were people of low social prestige who were seeking recognition.

Kindoki: an unconscious striving towards individuation

While *Kindoki* reveals tensions in interpersonal relationships and serves as a device for the control and integration of society, the psychotherapist needs to ask the following question: "Does *kindoki* reflect the individual's unconscious striving for personality integration?" When a person uses *kindoki* in identifying the cause of his existential condition, clinical data also indicate that the unconscious is driving the individual ego to move from dependency towards self-affirmation and integration, and integrity is one of the dynamics operating in the individual's psyche. We are inclined therefore to state the following affirmation.

Beliefs in *kindoki*, at another significant level, are a representation of unconscious striving of the ego towards integrity. Beliefs in *kindoki* seem to be concerned with the individual psychosocial crises. The individual using the symbolism of *kindoki* in presenting his problem expresses a positive concern to engage himself in the process of individuation. He uses *kindoki* as a process of identity formation, a means of affirming oneself in the context of the social system of thought and relationships. He uses the socio-cultural symbolism of *kindoki* because in it his identity and the identity of his group are bound together in a network of psychological dynamics. His identity is thus a process located in the core of the individual and yet also in the core of his communal culture, a process which establishes, in fact, the identity of those two identities.

The following case (see Appendix) illustrates the unconscious striving towards individuation and integration of primeval identities in man. Unaware of the conflicting natures of the inner personality and the polarization of self ego and social ego, man uses bewitchment symbolisms of persecution to harmonize his feminine and masculine natures and to seek personal identity. The divided self becomes a battlefield instead of a means of understanding the other side of oneself whenever the unconscious gets a chance to occupy the foreground [11].

The counseling of Malungu Ndombasi and his wife took place between 1967 and 1969. He is about 56 years of age. They have 5 children who are all married at the present time. They live in the Commercial Centre of Kimpese.

Malungu Ndombasi works in a store as a janitor and helper to the salesman. He has no education but knows how to read and write. He has a coherent thinking even though he has difficulty thinking abstractly. He likes to joke and socialize with other people in some feminine manners. He is a very cheerful person.

He talked very openly about his problem without being ashamed as it is usually difficult to see an older person freely involved in a counselling relationship with a younger person. Probably his impression of me, which he formulated after my preaching at his church, helped to facilitate the relationship.

In early 1965 his son who was in high school, asked him to buy him a new suit as required by the school for his graduation. The father told his son to ask his mother. As the couple found it impossible to buy new clothes for the boy because of financial difficulties, the mother suggested that the boy be given one of the father's suits. The father gave the suit even though he did not accept this idea. However, he never showed his disagreement. What complicated the problem is the fact that the mother bought a suitcase for the boy without letting the father know about it.

In July 1966 a young man came to Malungu Ndombasi with a letter he had written asking Ndombasi's consent to marry his daughter. Ndombasi sent the young man to his wife to see what she would say. Mama Mary told the boy of her consent but added that the letter had to be sent to the daughter's uncles at the village. Malungu Ndombasi was unhappy with his wife's suggestion which she had made without consulting him.

I asked him since when had his wife started making decisions by herself. "It has always been so since the beginning of our marriage," he said, "but it started irritating me when discussing the incidents with some of my friends. They pointed out to me and I realized how masculine my wife is." He saw her in the dream stealing his sexual organ, making herself become man and he a woman.

The following observations are necessary to understand the dynamics of the dream as a means of integration and individuation: Malungu Ndombasi lost his father at an early age and he had only one uncle who lived far from his sister. Malunga Ndombasi, therefore, had no male image. He was always afraid of boys as they joked about his being skinny. He was very dependent on his mother who made most of the decisions for him.

As his wife was domineering, to a great extent in order to get things going in the family, Malunga Ndombasi was happy. He was secure as he thought of himself as being in his mother's hands until his friends pointed out to him a social status he was not satisfying as a man. He started to criticize his wife and compete with her.

A few weeks after Malunga Ndombasi's anger towards his wife began, he started having the following illness:

- (a) He lost his appetite and was unable to sleep at ease. He had violent headaches and constipation.
- (b) His skin started drying up.
- (c) He heard voices and saw small objects (small rocks, peanuts, skin and sand) that were being thrown at him or were falling on his head 'like drops of rain'.
- (d) He also saw small insects that were trying to attack him.

As *ndoki* (sorcerer) his wife had the capacity to become man, feminizing biologically the husband.

What seemed to be sexual in dream symbols of bewitchment was only contextual; the perverted sex organs represented an important need to be affirmed as an individual, even in his feminine performances. This affirmation made through love, understanding and acceptance of his humanness, is the key to restoration and growth. His dream symbolism represented future lines of his personality development; it was an

unconscious urge to strive towards wholeness, completion, rebirth, and harmony between the anima and animus within his personality. This indicates that the significance of a symbol is not that it is a disguised indication of something that is generally known but that it is an endeavour to elucidate by analogy what is as yet completely unknown and only in the process of formation.

Bewitchment becomes a positive discourse and experience. It functions to preserve mental health and becomes a symbol of individuation. The bewitched uses the mythological and cultural symbolisms to handle psychic and psychological conflicts. Thus bewitchment declaration plays the same functions as dreams; they are an attempt to restore man's psychological balance by producing fantasies that re-establish, if handled in a positive way, not only the patient but also by the significant persons, the total psychic equilibrium. Bewitchment becomes a symbolic, mythical ritual used by the individual to redeem hidden, as well as social tensions, in order to move towards integration, individuation and maturation.

Beliefs in *kindoki* provide a symbolism in which the individual tries to deal with his growth crises, recognizing the conflict between growth and dependency, striving towards self-individuality in the context of group individuality, even though the cultural symbolism used expresses his experience as if his psyche were outside his ego. This implies that the individual's declaration of his bewitchment is an indication that the unconscious process of individuation is striving to come into awareness. In *kindoki* beliefs the individual expresses his desire and inner experience for self-affirmation. In times of personal crises the *kindoki* experience draws the demarcation line between the exopsychic, intrapsychic, and sociopsychic contents of personality structure and experiences which remain undifferentiated by the strong ties between the individual self and group self.

The *kindoki* symbolism enables the ego of the individual person to say 'no' to the group ego (superego) which is the dominant part of his personality structure. Some *kindoki* episodes which resemble transitory delusional states, represent learned behavioural patterns by which the boundaries between the ego and the superego which have remained blurred, are likely to be brought to awareness [12]. In *kindoki* experience, the individual uses the group ego to externalize his inner feelings and impulses as a means of fostering personal growth, and establish an ongoing, unfolding process of identity formation that leads towards integrity. The *kindoki* symbolism provides the context in which the individual discovers and actualizes himself.

CULTURAL ASPECTS OF PSYCHOTHERAPY IN THE AFRICAN CONTEXT

Frantz Fanon, working as a psychiatrist in North Africa, tried to integrate Moslems into European therapy. He encountered failures which forced him to restructure therapy around Moslem social environment beliefs and psychology. Peter Geisner describes Fanon's work in the following terms:

Sometimes after he completed his basic reforms within the hospital—freeing the patients from burdensome insti-

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tutional regulations—dividing his pavillions into smaller living and working groups... the doctor noticed that the discharge rate of Europeans was much greater than the discharge of Moslems. Moreover, the Moslem men were beginning to try to avoid work therapy activities; they didn't care about movies or entertainment. Fanon and his colleagues set up carefully planned meetings with the Moslems to try to ascertain their grievances against the new programmes. The meetings, in fact all therapy, were greeted with hostility and indifference. The whole programme was becoming less and less successful within the Moslem wards.

The group meetings, as well as the therapy, became in Fanon's own words, 'only an empty ceremony—absurd—and after thinking about the matter we decided to suspend them.' It became clear to Fanon that his egalitarian attitude towards the patients was not correct. What he had been doing in reality, was to impose European solutions on Moslem problems. He had been treating the Algerians as though they were French carrying the effect of the French colonial policy of 'assimilation'. Fanon returned to the structuralist approach of his older teacher Tosquelles. This meant, in effect, trying to recreate the Moslem personality within Moslem society [13].

This experience reveals that at the present time when African countries are moving towards elaborating social institutions which reflect the authenticity of African social thought, medical practice as well as therapy should understand the cultural and social worlds of the person who claims to be under bewitchment and who is seeking help. He is part of society; his personality development and behaviour patterns are partly influenced by his cultural environment [14, 15]. The bewitched person should not be seen merely as "a creature of physiology responsive to overtones of psychological existence, but as a social and cultural animal" [6, p. 195]. When dealing with any pathology, phantasy, imagination, delusion, illness, the cultural dimension influencing the individual's concept of his illness and his behaviour responses to crises should be taken seriously so that sociology and culture which play a significant role in the development of personality can also become part of therapy.

Comparative studies in religion, sociology, anthropology, psychology and psychiatry are creating an awareness in health professions of the impact of cultural beliefs on personality development and mental health. The influence of culture in shaping the individual's perception towards oneself, others and the environment is a reality which can no longer be ignored. Diagnosis and therapy which have heavily depended upon Western interpretations need, therefore, to be free from Western cultural control. We do accept the universality of humankind, but this recognition should not prevent us from accepting the basic personality, that is the identity, of each group of persons who share common socio-cultural roots, living some experiences and expressing feelings in the context of their cultural values.

Basically, the African presents the following personality traits: comforting dependency due to the interconnection existing between the individual and his community; mystical interpretation of life and his cosmos; omnipotence of thought as word possesses power; freedom of spontaneity in group encounter experiences; positive affirmation of life in its human

interactions, instinctual responses, the centrality of interpersonal relationships.

Let me make four remarks which point to some directions being taken and which could better suit the development of psycho-therapy in Africa.

First, within the African cultures concepts of illness and health are far more social and cultural than biological. As personality development and behaviour patterns are greatly influenced by cultural environment, when dealing with any psycho-pathology, the cultural dimension influencing the individual's perceptions of himself and the world around him should be taken seriously so that sociology and culture which play a significant role in the development of personality can also become part of learning to grow and to be free.

Second, psychotherapy in the African context should be cognizant of evil forces as a very potent reality, not only in the patient's perceptual world, but also in the therapeutic process that is to be planned for the patient. As a starting point, the therapist should accept as valid the experience of the patient. This therapeutic encounter lowers the distance separating the patient and the therapist. By accepting the diagnosis of the patient, his world view is at the disposal of the therapist who, with analytical mind, can explore it in depth.

Traditional healers depend on socially accepted concepts of causation. They ascribe the cause to a personal agent. The great influence attained is due to treatment that follows understandable customary patterns and treatment is directed towards elimination of the cause of illness which is believed in by the patient. His capacity to share the patient's world makes it easy for the patient to move towards another level of explanation. Here is the place where education could take place regarding concepts of illness. Some concepts of causation could be modified.

The concept of mental illness through breaking social taboos could be explained in terms of the effect of guilt on mind and body. The concept of illness through bewitchment could be explained in terms of attitudes of rejection that sometimes prevail in family interactions.

Third, as concepts of health are more social than biological in Africa, the unitary concept of psychosomatic inter-relationship, i.e. the unity of mind and body, should dictate the principles of treatment. A unitary concept of patient and environment should be included in the course of therapy. The concept of community-type therapeutic centres should be emphasized, and not the hospital-type therapy which excludes the individual patient from interacting with members of his family.

In many African societies, group therapeutic palaver serves as the most immediate and first step for diagnosis and treatment plan, not only for the patient but for his immediate family members as well. The process of palaver therapy is varied according to different cultures. In some groups such as the Ewondo of Cameroun, the diviner's or the traditional healer's diagnosis is the starting point. In some other societies, such as Ba-Kongo of Lower Zaire, the elder of the clan takes the place of the diviner. Whenever a member of the clan is sick the elder's role is to group members of the clan for group therapeutic palaver.

Both groups are interested in diagnosing the patient's illness in terms of broken relationships and in seeking a plan of action to be taken for healing.

The first step in the healing process is the establishment of hope, confidence, and restoration of relationships between the patient and some members of the clan. The healer, in group therapeutic palaver, plays the role of intermediary between the patient and the kinsmen so that whatever relationship which was broken might be restored. He uses directive therapy when he offers suggestions and advice to both parties.

Group therapeutic palaver offers a living opportunity for group therapy to become a means for community teaching and community search for new human values, such as love based on acceptance and not on performance. The emphasis laid by the group therapeutic palaver method on the individual to accept his guilt, is to make public those personal misbehaviours and unexpressed feelings which were blocked in the relationship and to make society aware of that which the individual was feeling. This is a healthy approach. The shame, guilt, and responsibility on both the patient and his society, can become a true weapon to redeem the individual and the society from fear of destruction. The attitude of love will reinforce the healing and growth of the patient and the society. The group therapeutic palaver technique offers an opportunity for education to the community for redemptive relationships. Forgiveness and love which can result from these therapeutic palaver groups can foster a positive transfer. Dr Lambo affirms the fact that the success of recovery in African depends on an adequate affective transfer.

Even when the prognosis is unfavourable, a positive transfer of affect under the sympathetic conditions of the village and within the context of a warm sympathetic and tolerant therapeutic relationship, may be used to prevent patients from deteriorating [16].

Even though therapeutic palavers share, in some instances an unconscious cultural paranoia with individual patients, opportunities for developing sensitive people for their personal and social growth are present in these group therapeutic palavers. Hope, confrontation and support of the patient by other members of the group become dynamic factors in the healing process. The use of positive traditional elements of the therapeutic palaver, such as acceptance, participation, transference and hope can strengthen the therapeutic process. The community framework in which therapeutic palavers take place offer teaching opportunities with the intention of making the community aware of some of the social pathologies that cripple the individual.

The individual's attitude towards himself and others, the interpretation of the world around him, develop and are sustained in relationship with others. There is a continuous interaction between social environment (traditional and contemporary environmental beliefs) and personality (illness and healing). The major causes of psychopathology are also social, involving traditional beliefs, influences and demands. Personal failures in terms of fortune and ethical standards, which may result in maladjusted behaviour because of guilt, are viewed primarily in terms of con-

flict between the individual performance (his id = instructional wishes and will) and the social standards and demands. It is therefore necessary to rehabilitate the disturbed individual within his social environment for the cure of the patient and the reformation-growth process of the social order. Frantz Fanon suggests that neurosis—as character disorder—in the African social context, is more related to his present environmental circumstances than to youthful trauma as believed by Freud.

The neurotic structures of an individual are simply the elaboration, the formation, the eruption within the ego of conflictual clusters arising in part out of the environment and in part out of the purely personal way in which the individual reacts to these influences [17].

When the demands of society are in strong conflict with the performance of the individual, the individual is likely to develop a maladjusted behaviour as he becomes disorganized and loses control. The individual may feel rejected for his performance and he may accuse family and society. He may develop withdrawal symptoms (into a schizoid or schizophrenic state). The best means for his recovery are to reconcile him in relationship with his significant others.

Family-oriented mental hospitals may even prove to be better in community-oriented societies. T. A. Lambo and Tal Asuni's Aro Hospital in Nigeria bring together patients with less disturbance living with other family members in four villages surrounding the hospital. The experiment has revealed a higher degree of discharge and a lower rate of relapse [5]. Traditional psychotherapeutic techniques should be supplemented with insight-oriented therapy.

Fourth, African traditional and prophetic therapeutic techniques do not usually deal with the analysis of a patient's personality structure and his deeper motives, with resulting expansion of self-awareness and personality-growth. In the abreaction phenomena of traditional psychiatry, there is often no attempt made to build the 'split-off' and unacceptable spirit elements into the conscious personality. Exhibited behaviours during trance or possession episodes and the dream experiences should be made available for the patient's conscience for analysis. It will be difficult to undertake such an approach, especially with patients whose personality structure makes it almost impossible to establish any boundary between ego, superego and social ego [18]. But their capacity to regress into schizophrenia-like episodes, is an indicative possibility to come to an awareness of the distinctive existence of ego and social ego. The individual through insight-oriented therapy, should be made aware of his coping mechanisms, the tendency for the ego to retreat into the primary process of thinking, using symbolic language, dreams, spirit possession, prophesying and the like, as some of the means of avoiding the secondary process of expressing one's inner feelings.

For some patients abreaction-producing therapy or gratification type of therapy provided by traditional and prophetic therapies do not suffice for personal growth. Insight-oriented psycho-therapy is necessary:

(a) to increase the patient's self-awareness in understanding, listening to and expressing his own feelings

and experiences without fear of being blamed by others;

(b) to become aware of one's self-directedness, and autonomy even though experienced in relationship with others;

(c) to help the patient to become aware of repressed feelings, images, impulses, desires, memories and conflicts which limit his effective functioning.

Certain adaptations of insight-oriented therapy are necessary as psychotherapeutic techniques fit with the culture in which they should take their theoretical roots. There is not one psychotherapy; there are many, and each culture should be respected in order to allow the individual to understand the social dynamics that create concepts of illness and health.

CONCLUSION

In conclusion, let us say that cultural beliefs in bewitchment accomplish the following functions:

(a) They provide an explanation for the behaviour of aberrant members of the community.

(b) They provide a means of structuring the social relations with these aberrants to the rest of the community.

(c) They provide a conceptual framework for therapy that relieves the anxiety of neurotic symptoms and restores them to their proper social role.

The bewitched person, in his/her own discourse, sets up a framework whereby diagnosis and therapy are put at the disposal of the helping person.

To the African the psyche is not only the domain of mental activities, but also the extension of the somatic, the spiritual and relational interactions and interactivities. Thus, to speak of purely somatic illness is unthinkable, at least in the traditional African societies. Illness, which is generalized in the organism, is always spiritualized in diagnosing it.

Traditional healing and therapeutic methods were directed towards total healing by detecting broken relationships which have facilitated the introduction of foreign agents in the patient. The treatment of the symptom (the body) alone in the traditional way could only provide ephemeral results. Beliefs in Kindoki provide but a diagnosis for illness and disease. An atomistic origin of illness should not overshadow the relational interpretation as causing the whole person to suffer. A mother whose child suffers from anaemia (problem-to-be-solved) should be helped to deal with the relational problem (basic problem) she brings in diagnosing the illness. Broken relationships should be considered as having effects on the individual.

Perlman talks about 'basic-problems' and 'problem-to-be-solved' [19]. A problem-to-be-solved, she says, is usually superimposed upon a 'basic problem', but the close proximity should not conceal from us that two different kinds of problems are involved and that each calls for its own treatment techniques.

Once the symptoms have been socially recognized, both a disease and a sick person exist and they exist within a social situation. Essentially, therapeutic efforts must be directed towards changing or removing the situation. The

essential difference between Western and traditional medicine can be stated at its most extreme by saying that western trained doctors see disease as causing the situation. The traditional healer sees the situation as causing the disease [20].

The bewitched persons who have helped us to take a journey to Africa, have made us aware of the fact that, being considered as persons on the fringe of society, they bring to the dialogue an awareness of oppression, suffering and healing which should change notions of research and psychotherapy.

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APPENDIX

Dialogue between Malungu Ndombasi and the Therapist

- Malungu: Good morning. My name is Malungu Ndombasi and I am a member of the Protestant Church of the Commercial Centre.

- Therapist: Good morning, Tata Ndombasi, please sit down. How can I be of help to you?
- Malungu: I'd be glad if you would give me a divorce certificate today. I've had enough. I was thinking of going to the local court; but my wife and I were baptized in this parish. I feel that I must come here before going to the court.
- Therapist: Tata Ndombasi, would you like us to talk first about your wife before we discuss the divorce certificate?
- Malungu: Certainly. But I have already spoken to several people and I can't get a satisfactory response.
- Therapist: I am more interested in what other people have said to you.
- Malungu: I appreciate your wanting me to talk to you about my problem. For the past three years, the wife has had no respect for me at all. I can't take it any longer. I've left her in the house by herself because I can't see why I should remain there under the same roof with her.
- Therapist: You've had enough, you said. Since you left your wife have you discussed your problem with someone to help you towards a reconciliation?
- Malungu: Well, yes. I have even got the whole family together to help us. But they don't understand the problem.
- Therapist: You said that your wife has no respect for you. In what way do you mean?
- Malungu: (In a very emotional tone of voice.) Pastor, how can your wife respect you when she acts like a man and takes over your role?
- Therapist: Do you want to know what I would think if my wife assumed my role as father of the family?
- Malungu: Not just that. But when she monopolizes everything in the house. She's really bad; she has no respect whatsoever.
- Therapist: Your wife runs everything and has no respect for you?
- Malungu: That's it, exactly.
- Therapist: I'd like you to tell me about the situation in which she had a monopoly in your relationship or in her relationship with the family.
- Malungu: When it's a case of blaming the children, the wretched woman won't support decisions I make. She contradicts me, she knows that the children belong to her, so she changes my decisions all the time.
- Therapist: Let's pretend that one of your children is in this office. He is sitting at the end of the table there. He does something amiss and you have to have a talk with him. Talk to him now.
- Malungu: My son comes from school and asks us to give him the suit I often wear, because the school requires every child to wear a suit. I tell him: "go and ask your mother what she thinks about it". The boy goes out, and talks with his mother. Then in the evening, I see him wearing the suit.
- Therapist: Your tone of voice indicates that you don't want the boy to have the suit.
- Malungu: I couldn't say no to this woman I thought could understand me. I had not spoken to her for two days.
- Therapist: Malungu, what is your wife's name?
- Malungu: (There was a long silence before he spoke.) Her name is Mary.
- Therapist: From what you have just told me, you haven't told Mary that you didn't want to give the suit to your son. Does she know that your silence is a sign of your dissatisfaction because of a decision of hers?
- Malungu: I didn't tell her that, she could understand—she is intelligent.
- Therapist: What do you think of Mary when she doesn't seem to grasp what you're thinking?
- Malungu: I think she knows what she's having, she just likes to contradict me.
- Therapist: Tell me about another occasion when Mary contradicted you.
- Malungu: When the boy who wanted to marry our daughter came to tell me so, I suggested he speak with my wife and then tell me her decision. Later the boy told us that she had given a general agreement. I was really mad about her saying that.
- Therapist: Your wife's general consent irritates you?
- Malungu: Yes, because she should have talked it over with me. It's the uncles in the village who make the decision about the children's marriages, not the mother.
- Therapist: I know that. But you should have sent the boy to the village to talk with the uncles. But you sent him to talk to the girl's mother, your wife. Isn't that so?
- Malungu: Yes, that's right. But she's still wrong to give an agreement.
- Therapist: What sort of agreement did she give?
- Malungu: She said it depended on us and on the uncles in the village.
- Therapist: I can't see how Mary has monopolized the decision if her acceptance was such that it still depended on you and the uncles in the village.
- Malungu: Yes, but I really didn't like the boy. But he still married my daughter. And it's since then that I've been feeling sick. The uncles in the village were aware that I didn't really like the boy.
- Therapist: Since then you've been ill. Tell me about illness.
- Malungu: I've had treatment in various places. I have been in various hospitals and visited several healers, but I am still sick. Wherever I am I hear voices of invisible men speaking to me. I see stones hurled at me, and insects gnawing at my brain. Do you see the skin on my arms? It's dry; I have no more life. See those wounds on my feet? I cannot sleep. There are sorcerers in the night. During the day, no one understands me. I've really had all I can take.
- Therapist: You've just told me you hear voices of Ndoki; tell me what they say.
- Malungu: I just hear the voices, but I can't tell what they say.
- Therapist: Ask the person who's speaking to you to explain what he's saying to you.
- Malungu: No. How can I talk to this creature who is so much cleverer than I? I'm just not bold enough and every time I try to speak, I get so frightened that I can't even open my mouth.
- Therapist: Do you recognize the voices of particular sorcerers who speak to you and the faces of people in the group?
- Malungu: Yes. The one I recognize most clearly is my wife's voice. Do you know what she does in the night? When I see her in a dream, she's

approaching the house. She enters in some miraculous manner and gets into bed. She robs me of my penis and attaches it on her own body and transfers her vagina and breasts to me. Do you see what she's doing? She makes a woman of me. Now, pastor, how do you imagine I can live with a sorceress? I have woken her to tell her about it, but she wouldn't even pay any attention. Still she refuses to agree that she is a sorceress. (Malungu's anima-animus dichotomy inherited biologically and unconsciously creates a chaotic life experience in Malungu Ndombasi's relationship with his wife. This chaos has been precipitated by social crises.)

Therapist: In the dream, where does your wife come from when she enters the house?

Malungu: I really don't know. I haven't even dared to ask her. But she is often in the company of other people with whom she has conspired during the night to kill me.

Therapist: Tell your wife you suspect her.

Malungu: No. She wouldn't agree. But she knows that I am aware of what she does with other men.

Therapist: When Mary goes to bed, does she try to have sexual relations with you before stealing your penis?

Malungu: I am often terrified when she gets into bed. I agree to be together with her; but I really don't like sexual relationships when I discover I have her genitals instead of my own. She makes me go on, but it's awful! What a scheming unChristian Ndoki she is.

Therapist: I notice how terrified you are now, just as if you are under bewitchment. Talk to your wife now and let her know how you feel.

Malungu: Heavens no. How could I? She scares the life out of me.

Therapist: You don't often have the courage to really talk with your wife, even to tell her what is really happening inside of you. What is her attitude to you when you don't let her continue to enjoy her sexuality?

Malungu: She is so masculine and I detest that. She accuses me of being a weak, impotent man. That's why I believe she looks around for other men.

Therapist: Malungu, what your wife does during the day she also does at night, because you seem to appear weaker than she is. Could you compare this relationship with that of yourself and your mother.

Malungu: My father died when I was 10 years old and my mother brought me up. She was too good to me—she did everything for me. She was overprotective. My wife had all the characteristics of my mother! That's why I really got along well with her. But she's changed lately. Till then she took good care of me and was very faithful.

Therapist: You appreciate and belittle your wife at the same time.

Malungu: I used to appreciate her courage. But I am sorry that she became a Ndoki a few years ago.

Therapist: I sense feelings of jealousy of what she does, because you're not able to do it, and be like her.

Malungu: I cannot do it. I'm not the sly type that she is. She's feminine during the day and masculine at night. I can't compete with her and my friends really criticize me a lot. I do not know how to become a better father.

Therapist: You are beginning to understand the situation. You must look for ways of asserting yourself as father of the family and your wife's husband. Your friends cannot teach you that. What do you think you can do to exercise your role as husband and head of the household?

Malungu: I don't know. I beg you, come to the house first and sprinkle some holy water so that the Ndoki won't come in any more. The Catholics do that for their members. Won't you too? All these wounds you see on my legs have been given me by sorcerers. They just sat on my body at night. To protect myself I light 13 oil lamps and put 12 of them around me as a symbol of Jesus' 12 apostles and I put one between my legs as a sign of the presence of Jesus himself. But one evening, insects, my wife's soldier sorcerers, were so numerous and so powerful that in chasing them away I burned myself badly with the lamp that was between my legs. I really am suffering. Can't you see these insects coming? I cannot rest. I'm more dead than alive. I haven't slept at all since my wife left the house.

Therapist: What a plight! What does your wife say about this situation?

Malungu: I know she sends the insects. Since she quit living in the house, I dream more than ever before. She wants me to die and that's all about it. Come to the house and you'll see what I mean about all the suffering I'm going through...

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V (b) PRACTICE AND PLANNING

OBSERVATIONS FROM GENERAL PRACTICE

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Abstract—Although some of these comments are about papers which appear in other sections of this publication, the author addresses general conference issues and in particular, the application of medical anthropology to medical practice.

I must say from my point of view that I found the papers (by Blom, Kimani, Ngubane and Masamba) like a breath of fresh air. Just to declare my own interest as a doctor and an anthropologist, my perspective is on the *applied* aspect of medical anthropology. And I think that nothing concentrates the mind more than reality, more than dealing with the real situation on the ground—dealing with real people, and not with abstractions. I would echo Don Bates' warning that if one gets too involved in very abstract theories, then one does run the risk in medical anthropology of landing up in a cul-de-sac. It may be a very comfortable and well-furnished cul-de-sac, but it would be a cul-de-sac nevertheless. Medical anthropology would not penetrate into other branches of social science, and it would not penetrate into the medical world.

The point I want to make is that if one adopts a practical, applied approach, then the first question that really crops up is: *who* is the patient? Is the patient a society, as a Marxist analysis would have it, where a sick society produces a sick person? Is it the family or social grouping?—a sort of R. D. Laing or to some extent a Victor Turner perspective? Or is it the individuals themselves, as a Western biomedical model would have it?

Now, as a speaker from Zaire pointed out this morning, these three are not necessarily compatible. And in the situation of finding a scapegoat for common misfortune, the 'health' of the group may be conceived as having been improved by the death or illness of one of its members, who has been blamed for this misfortune. So that it depends on what level of health one is talking about. As the level of health varies, so does the level of analysis.

A point that struck me is the pluralism of approach of the four speakers. While the eventual aim of all four is, as I understand it and I hope I am right, to improve health care in Africa in any way possible—we have been presented with, in a sense, four different analytical approaches. Dick's approach is basically statistical and sociological, based on empirical, numerical data. Masamba's approach is basically psychoanalytic, or what I would call 'psychological functionalism', and it utilizes elements of Freud, Jung, and Radcliffe-Brown. Harriet's is the more ethnomedical, ethnographic perspective, and Violet uses much of the vocabulary of economics in describing patients' choices between different types of therapy, even

though, as she has made clear, this is not a cost effective type of behaviour, and the aim is not 'profit', but what she calls Full Health or a state of harmony. Nevertheless the picture is that of consumers who make *choices* between different types of healers—health care being seen as a type of commodity.

I think this is a valuable cross-fertilisation of four different perspectives. Each of them in some ways has its limitations, like all analytical models, but added together they give a very valuable and well-rounded picture.

Now I just want to extract a few points from the papers, which I think may have significance to applied medical anthropology, and which would be of interest to somebody who's actually going to work in Africa or in any other area of the Third World; and just to summarize a few of the points that I've heard.

First of all: Traditional Healers. Now what are the main points that have come out about traditional African healers? Well, first of all, traditional healers are obviously deeply imbedded in the social, economic, and cosmological aspects of their societies. Secondly, they are chosen by their patients; patients or their families can choose which type of healer to go to. The healers themselves also have a wide range of choices as to what type of treatment their patients are to be given—whether they are even going to deal with the problem, or whether it's going to be passed on, perhaps to a Western-trained doctor. Both Harriet and Violet have mentioned these points. Often traditional healers have a two-tiered system of care, in the sense of referring patients to 'specialists'—using Western terminology. One thinks of the Zulu *inyanga* and *isangoma* who often refer patients to each other. Traditional healers don't only deal with cosmological and social problems, they also deal with technical, practical problems. Violet mentions bone-setters, circumcisers, and herbalists who are practical workmen or -women. Another point of great importance that has come out about traditional healers, is that they are not only a rural phenomenon—and, as Violet said, they may decline in the countryside and yet thrive in the cities. So that the rural-urban dichotomy isn't quite as neat as many people would have us believe. There is also a wide spectrum of traditional healers available. Bernard Greenwood mentioned 14 types and Linda Sussman has mentioned 13 in her study of Mauritius. The traditional healers utilize a large number of props, including many borrowed

from Western medicine; we've actually seen on slides a number of traditional healers using accountancy pads, white coats, syringes, and other props of Western medicine. I am sorry that this fact was largely ignored in most of the papers. One would like to see how the whole thing fits together—whether its just a mixture of artifacts from different systems, or a real syncretism of approach. A final point about the Kikuyu lady in Violet's paper who sought therapy from *ten* different sources. She is, in a sense, the ultimate consumer of health care. And just to compare her to a Western patient who shops around to that extent—and whom we would call a hypochondriac! It would be a sort of pathology of over-choice.

To come back to a few other points. Through the World Health Organisation, as Violet has mentioned, traditional healers have been given some form of formal acknowledgement and recognition, particularly in under-doctored areas, as a valuable form of health care. A major problem in Africa, as in other parts of the Third World, is that Western-trained doctors cluster in the cities where the money is, or work in big hospitals—leaving the countryside largely under-doctored.

Another point that has come out is that the two systems can be used parallel as complementary to each other; as Violet has mentioned, neither of the systems is adequate on its own. They can also be used simultaneously without inducing massive cognitive dissonance. I want to make a number of comparisons with Britain as we go along. In Britain, in fact, you have two parallel systems of health care which in some ways correspond with the African example—though many people might not at first see the similarity—one is the socialized National Health Service where the patient has limited choice, and the other is private medicine where one has maximum choice. A lot of the attributes of the private system match, in some ways those of the traditional healers in Africa. Using Eisenberg's and Fabrega's distinction between 'illness' and 'disease', you might say that in Britain private medicine deals more with 'illness' and the National Health Service deals mostly with 'disease'. So that what money buys in the West is especially *choice*—choice of healer, choice of therapy, choice of hospital—as well as some element of *control* over each of these elements. This, it seems, coming out of some of the papers, is what the traditional healer provides as well. That the consumer or patient has maximum *control*, or at least more control, over the treatment of 'illness' than he or she would have in a Western hospital situation.

A point about syncretism at the interface between Western and traditional medicine: there is obviously not a neat dualistic split between the two systems of beliefs and practices. Carol MacCormack mentioned how traditional herbal remedies are being collected by W.H.O. and packaged in a Western form, and then sold back to the people—which effectively ignores the traditional cultural context of their use—which determined who used them, who dispensed them and under what circumstances they were dispensed. But the same thing applies in the other direction, i.e. that Western medical techniques can be used in a traditional setting and in a traditional way—syringes are a good example of this. I mean that even injections of

certain antibiotics can be used within the traditional context and therefore have a different type of meaning to those taking part in the curing ceremony.

Another point I would like to have heard more about is the *change* in the nature of traditional healing. One does get a rather static and idealized picture of the rural healer, and one doesn't really know the types of change or evolution that are taking place—what they are incorporating from other medical systems and why they are incorporating these new elements.

Looking at the problem from the patient's perspective, we can see how they utilize choice, how they shop around, how their whole cognitive system does not have to be involved in health choices. And if you are in rural Zululand or the Transkei and you take an aspirin, it does not imply that you have cognitive dissonance, or that the whole of Western biochemistry has had to be learnt in order to understand the end product which is the aspirin. The number of people in the West, I should add, who understand the origins of medicines and diseases is minimal in any case, and I include doctors here. So the use of multiple strategies for attaining health, without suffering cognitive dissonance, is certainly not unique to Africa. It exists in every society on the general rule of 'the more the merrier'. You may wear a Saint Christopher for luck, but you may also take penicillin. You may take antibiotics, but you can also go to Lourdes. In the West, as in Africa, these two attitudes are not seen as being incompatible.

I think a weakness of the papers is that there has not been enough emphasis on the ideological content of Western medicine *per se*. We see Western-trained doctors in these papers as sort of vague threatening figures on the periphery of the African patient's viewpoint. We know that people don't get along with these doctors. We know roughly, why they don't, but we don't know in effect who they are and the nature of their medical ideology. I think it is important in any model of pluralistic systems not only to study the rural traditional ones, but also to study how those imported from overseas, or brought from city to country—change their nature to fit local conditions. The thrust of my own research is that technological Western medicine doesn't really suit the West. So if it doesn't suit the West, I can't see how they can honestly suit the Third World either.

We've also, I think, largely ignored the penetration, not so much of Western doctors, as I have mentioned, but of Western medical *artifacts*—medicines, syringes, scalpels and other props of medical science. I feel that in Harriet's paper we didn't really hear enough of the Western elements in Zululand. We don't hear enough of the effects of migrant labour—people going to the towns to work and coming back. What ideas about health do they bring back with them? Do they bring aspirin or other patent medicines? And what about the situation of African doctors working in rural areas?

Does enculturation into the Western medical system cause a barrier between these doctors and their patients, and if so what is the nature of this barrier?

Just to make a few points clear: I think that there has been an over-emphasis so far on patients' disease theories—the assumption that the patient is an end-

less theorizer, with conceptual models to explain every illness event. I think it is worth pointing out that there are, in a sense, several tiers of knowledge about ill-health. What we might term the level of Assumptions is that level of everyday experience which is never really discussed, or consciously theorized about. As a classic example, if an apple drops off a tree, you do not need to know all of Newtonian physics in order to pick it up and eat it. Similarly, if you bump your hand and then rub it, you do not need to have a system of explanations as to how counter-irritation suppresses pain before taking this action. A large area of health behaviour is covered by these assumptions. And I think that Horton or Fabrega would say that only when these assumptions prove ineffective in relieving distress—and where illness is seen as an interruption in the flow of daily life and expectations—then the theories come in, and we are then in the area of explanations of misfortune. So I think it is important to remember that there's a large area of everyday life and of health behaviour which is dealt with by what one would term common-sense—where no great theories, no great conceptual systems come into play. People bump their hands, and they rub them. I think that only when they rub them and they don't get better would they move onto theorizing about what has gone wrong, and wondering whom they should consult for further help. I think this is rather important because otherwise one does tend to see too theoretical a dimension in people's health behaviour.

I think I would like to go briefly into slightly more detail on the four papers. First of all, Dick Blom's paper, which is an attempt to measure the efficacy of health care in a statistical way. Now there are various ways that you can measure this. The W.H.O. has experimented with this. The problem is that in a field situation reliable statistics are often impossible to come across, especially indices of the health situation in a given area. For that reason I think that Dick Blom's *Survival Index* is a very valuable tool—a useful starting point in trying to get reliable indicators of health in a developing country. It is fairly easy to get the information that one needs to work out the *Survival Index*, and it does give us some indication of how the health of a population is changing over a period of time. Obviously, as Dick mentions in his paper, there are several flaws in an indicator of this sort—both in its own terms, and in the context in which it operates. For example, the two aspects of it—gravity, i.e. the number of pregnancies—and the number of children surviving—can both be highly unreliable. Many women get pregnant without knowing it, and have early miscarriages—so these are not put into the whole model. Secondly, it may be a better indicator, as in cancer statistics, to measure survival of children to a certain age—because, say, if a woman has 4 children, aged 1, 2, 3 and 4 years old, but a month after the interview they all die of an illness that kills children under the age of 5, then the statistics are completely unreliable. It may also be useful to see, say, the number of children that survive to puberty. In other words, to give the *Index* a time-limited aspect. Also, survival *per se* is a very unreliable, and in a sense very Western concept. A person who is on a heart-lung machine for a year in a coma

is surviving, but is not 'healthy'. So life span itself is not enough. Again, other indicators might be the measured weights and heights of children. The children might survive to a certain age, but they might be brain-damaged from kwashiorkor or marasmus, or other deficiency diseases. Their growth might be stunted by rickets or other disorders. Another aspect one might deal with is maternal health; and various indicators of this could be looked at. Obviously, in an ideal situation, lots of reliable statistics are available. But in real life, as Dick points out, particularly in the rural part of an under-developed country, this is usually not the case; so I think his *Survival Index* does have a practical value in any primary health care program. In applied anthropology one does need a mixture of 'hard' and 'soft' data—'hard' data is statistics and objective measurements; 'soft' data is ethnography, reportage or personal experiences. You do need both. Both should be looked at with the beady eye of suspicion when presented on their own, I think, but added together they do give a more total picture.

Another problem with health care that one should mention is that 'survival' without an increase in food production is not much good. If you increase the size of the population, so you may increase the number of people dying of famine, and this can hardly be regarded as a success. And many health workers now feel that these two aspects must be linked together—increased food production must be measured against improvement in objective criteria of health or survival.

On Harriet Ngubane's paper I have mentioned a few points. I enjoyed her paper very much because I think it focuses, for the first time, on the *healers* and their types of social networks within the society—not exactly an A.M.A. or B.M.A., but a sort of loose association of healers. I find it very useful, particularly as traditional healers are often seen in isolation by anthropologists, and not against a background of their fellow healers. We learn from her paper of the informal organisations of healers, who serve to control their behaviour and discipline them if necessary. Through the networks of diviners each one will come into contact with over 400 fellow-diviners, and this is important in sharing techniques and information, in monitoring each other's behaviour, recruiting new diviners and so on. She gives an excellent picture of how these diviners fit into the cosmology of the Zulus, how they are credited with clairvoyant powers and possession by spirits, and how therefore they are regarded as custodians of the Zulu world-view and morality. Although it was not the subject of her paper, I would like to have known more about how Western doctors fit into this situation. As I mentioned before, I am a doctor and so this interests me. Is the gap between local doctors and patients in rural Zululand just the gap between Western medicine and traditional medicine, or is it all the other factors—such as the apartheid system, and the political, racial, economic, and rural/urban differences between doctors and patients—a whole cluster of elements—which would mark the doctor in that area from his patients? We know the classificatory system of the modern hospital and therefore it's much easier to understand the gap between a traditional healing system and Western hospital medicine. Hospital medicine, as we know,

divides people by age, by sex, by condition and divides them into smaller and smaller bits for treatment; and this is very different from the wholistic approach of the Zulu diviner. I also found the description of the inter-relationship of the *inyanga* and *isangoma* very useful, and particularly their tolerance of each other, and of Western doctors. Obviously this is a one-way tolerance, we know, because Western medicine looks down on traditional healers—certainly in South Africa. I found, I think, the same tolerance in the paper on Kenya—that traditional healers are quite open to a mixed system. Many doctors see traditional healers as a threat, which I think is a great pity.

We have been given data on the diviner's role in Zulu society and how they deal with a much wider range of problems and phenomena than the average Western doctor. I would just like to throw in a point here, which has recently occurred to me: it may be that we are reaching a situation in the West where doctors are becoming equivalent, in some respects, to Third World healers. The reason I say this is because the ideology and metaphor of medicine is spreading widely throughout society—the ideology of seeing everything in terms of 'health' and 'disease'. I am thinking of Ivan Illich, and of Susan Sontag's work—particularly her book, *Illness as Metaphor*. And if you speak about the 'sick economy', and 'ailing Pound', or strikes being 'the British Disease', it may be that the widening of the medical model might arrive at a situation—and this is purely speculative—where the ills of a 'sick society' are 'diagnosed' and 'cured' by a variety of experts linked by their richly symbolic title of 'Doctor': not only medical doctors, that is, but doctors of economics as well—like the 'public doctors' in Gwyn's paper. In some respects I can see similarities between this cluster of 'doctors' and the wide range of problems they deal with, and diviners and other healers in Third World countries.

A few points about Violet Kimani's paper. I found it of great interest because she does mention the wide range of options available to the consumer in the plural health care system of Kenya, ranging from modern hospitals to 'street and bus-depot doctor-boys'. We see how medical artifacts such as antibiotic capsules and syringes are commonly used by 'bush doctors' and other untrained therapists. How the traditional Kikuyu healer—the *mganga*—like the Zulu *isangoma* and *inyanga*, is knowledgeable about the cosmological background of ill-health, as well as about practical remedies for more minor problems. And most important, she gives an actual case history of the types of therapy choices made by a particular patient, suffering in this case, from infertility and abdominal pain. So here we have a clear picture of how a plural medical system actually works, and how it is seen through the eyes of a consumer. This is obviously very important to anyone planning a primary health care system in a country such as Kenya. I fully agree with Violet that neither the Western nor the traditional systems are adequate on their own, but should rather be seen as complementary. I think it is very important, as she has mentioned, that Kenya's current Development Plan for 1979–1983 now recognizes the value of traditional medicine in caring for the health of the people. One

problem about her paper, though, is that I'm not so sure we know *why* people choose one system and not another. What are the criteria for people moving from one system to another? It may be that in each society there is a central core of symptoms or problems which, in that society, are more likely to make use of the wide variety of options in a pluralistic system. These core symptoms might for example be those perceived as 'Western' in origin, or else those serious situations where traditional medicine is not much use—infertility, for example. I don't think it has come out clear enough from the papers as to what these markers or signposts for change in therapy are. Is it efficacy? And how is efficacy measured from the patient's point of view, where so many systems of healing are utilized—many of them ideologically incompatible with one another?

In Masamba ma Mpolo's paper *bewitchment* is looked at largely from the perspective of Freudian psychoanalytic theory. I do appreciate the paper for its emphasis on the patient and his perceptions, which seems to fill in a gap left by Victor Turner and others where we see the situation from the outside, as it were. Masamba has examined in some detail the psychological basis of witchcraft, utilizing a functionalist perspective; witchcraft is seen as a culturally appropriate way of expressing aggression, resolving ambivalent feelings encountered in the ambiguity of social relationships, and dealing with subjective feelings of hate, guilt, fear, anxiety and so on. While there are obvious limitations to any 'functionalist' view of cultural practices, this paper does perform a very valuable service in that it focuses attention on the *individual* and the emotional dividends that he or she gets from a situation of bewitchment. Kindoki symbolism, as he says, can provide a culturally appropriate context in which the patient discovers and actualizes himself, as well as dealing with emotional problems. One problem with this functionalist approach is the sort of static picture of African society and personality that one gets, particularly in the notional state of perfect harmony. Another problem, which someone mentioned in the paper on semiotics, is that of the translation of one model into the concepts of another: in this case African witchcraft into Freudian theory. In many respects, though, the Freudian system resembles Third World systems for the explanation of misfortune. The Freudian model is really the interplay of what one might see as mythological entities: i.e. 'Superego', 'Ego' and 'Id' within the notion of the Unconscious. And therefore psychological disease is seen as *imbalance*, as the spin-off of the battle between the Superego and the Ego, or between the Ego and the Id. In Masamba's model the aim of witchcraft declarations is to maintain or restore what he terms the 'total psychic equilibrium' of the patient, and the harmony between him and his society; witchcraft is really just a cultural vocabulary in which one expresses Freudian conflicts in an African setting. Although I am not in full agreement with this approach, I do think that this paper is a valuable guide to those interested in dealing with psychological problems and disorders in an African milieu.

To return to a point that I made at the beginning. From my perspective the key problem of this Conference is how to relate theory to practice, and ethnogra-

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phies to the actual planning of health services. I'm not so sure that link has been made. We need to hear more clearly the voice of the consumer; to ask them: What do *you* want from a health service? What kinds of healer, or healing, do *you* want for yourself or your family? Why did you choose *this* type of therapy over

another? And then to compare the effects of these health choices, by using the sort of objective criteria of health that Dick Blom mentioned in his paper; in particular, to measure these criteria in a system of medical pluralism, where one of the options available is that of Western medicine.

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ATTEMPTS TO COORDINATE THE WORK OF TRADITIONAL AND MODERN DOCTORS IN NAIROBI IN 1980

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Abstract This brief report of an ongoing official effort to coordinate medical pluralism speaks directly to the issues of this section: the application of cultural analysis to medical practice and planning.

A pilot survey to explore the possibility of actual co-ordination of plural health care in Nairobi revealed a positive response from the majority of the *waganga*.

Far from being the rugged individuals sometimes depicted, we found strong networks of cooperation and cross referral system, usually, but not always within ethnic groups. One busy traditional practitioner makes a policy of sending a personal letter of explanation with every patient he refers. Quite a few have continued to keep records of the patients they treat. We (research team) had introduced these ideas earlier in 1977 and some *waganga* have consistently kept records of each patient. The records consist mainly of the basic demographic information of the patients as well as the nature of the illness and the number of visits a particular patient has made to that *mganga* for the same illness.

In the process of interviewing the *waganga* in Nairobi, the question has often been raised as to whether or not the *waganga* would be willing to coordinate their efforts with the modern doctors in order to deliver maximum health care to patients. We were also curious as to whether the *waganga* would wish to improve their work through further learning.

In response to this all, those interviewed expressed deep desire for legitimization, a wish for collaboration with doctors of modern medicine and a majority of them said that they were interested in enrolling for a 'Training Course' should one be offered.

Only one or two *waganga* stated that since their knowledge came from god(s), it was sufficient for all purposes, and that a course would be superfluous! Another *mganga* said he would be eligible to teach the others in such a course. Other than these few the majority responded positively.

On asking for specific requirements and ideas as to how we could implement these objectives, the *waganga* came up with a variety of suggestions, some of which were very relevant and revealed a clear understanding of the problem. The suggestions ranged from a wish to learn all the complicated surgery and medicine, to asking to be taught some first aid. Many *waganga* wished to learn how to deal with heart conditions (*kupiga moyo* in Swahili) which implies rapid heart beats rather than heart problems in general; knowledge on how to preserve herbal medications especially how to make tablets out of them; how to give injections and how injections actually work; more information about the diseases they

already treat such as asthma and cancer; a few wanted to know what to do in an emergency while waiting for the ambulance. Some wanted to know how to diagnose without using the power of divination.

With the above suggestions as guidelines, the research team organized a preliminary programme for training the *waganga*. A selection of topics was made and speakers, mainly doctors, were invited from Kenyatta National Hospital. We also approached the Red Cross Society of Kenya to give lectures on First Aid. We arranged for two sessions a week, each session lasting about two hours. The attendance was good. However, since the speakers were invited at a personal level, some expressed concern that they might get into trouble either with the Ministry of Health or the Medical Board that looks into ethics and licencing of doctors. Their fears were based on the fact that although the Ministry of Health is willing to look into the question of traditional medicine, there is no clear statement, so far, as to how a modern doctor can work with the traditional doctor, let alone train him. Some expressed the worry that such a course might appear to be promoting the work of *waganga* even before research has established whether they (*waganga*) are doing the right things or not. Others felt the *waganga* will interpret the course to mean they are now 'recognized and licenced'. Since that time, the writer has approached both the Ministry of Health and the Chairman of the Medical Board for permission to carry out such a programme and permission has been granted.

Among the invited speakers who came, we had a consultant who talked about the heart, a paediatrician talked on some basic paediatric problems; he emphasized the importance of checking thoroughly that a newborn infant has nothing missing. This is important since many of the *waganga* are also traditional birth attendants. A nurse talked about diarrhoea, what to do about it, how to prevent it spreading, what diet to give to a diarrhoea patient. We had several sessions of first aid lectures, both theoretical and demonstrations. Another doctor talked about the body (elementary anatomy and physiology). All the speakers emphasized the importance of referring doubtful conditions to the hospital as soon as possible.

We made an evaluation of the course. All the 24 *waganga* who consistently attended all the sessions agreed that the course was very important.

In response to our question: "What did you learn from the course?" the answers varied from 'nothing' to 'a lot'. When we probed, we got the following answers:

To distinguish between what conditions to refer to the hospital and what to treat myself	4
To treat children's diseases	3
To treat diarrhoea	4
'Doctoring'	4
About heart diseases	9

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All the *waganga* expressed desire to continue with the course. Some wanted to be issued certificates to show they attended the course.

As pointed out earlier, this was a pilot project and a detailed one is being planned. The most encourag-

ing finding so far is the *waganga's* willingness to learn and to get recognition.

The significance of coordinating the work of *waganga* and modern doctors cannot be overemphasised. On casual visits to some urban *waganga* with some medical students, the students found out they could be based at these *waganga's* clinics, in the course of their field work experience, and do case-findings for such diseases as T.B. and STD (sexually transmitted diseases). Some *waganga* have expressed their willingness to be interviewed by a panel of modern doctors on treatment of any diseases.

One *mganga*, for example, in rural Machakos has been working with a laboratory technician who is based there by the district hospital to collect specimens of sputum of suspected T.B. patients. The technician sends the specimens to Machakos district hospital. The confirmed cases are then referred to the hospital for treatment. The *mganga* encourages such people to follow the hospital medicine.

HEALTH CARE AND THE CONCEPT OF LEGITIMACY

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Abstract—Health sector planning is here analyzed in terms of three forms of social legitimacy put forward by Max Weber: rational-legal, traditional and charismatic. Health care planning which is completely legitimated by rational-legal means in bureaucratic institutions usually leaves populations at the periphery of the system ill-provisioned, especially in societies such as many in Africa in which productive resources are in the rural countryside. A proposal is offered for the integration of legal-rational health care organization with traditional health care such that both sectors serve best for that which they are qualified, although not at the expense of the other.

PLANNING: A POINT OF VIEW

A disconcerting gap yawns between sensitive studies of indigenous systems of health and illness on the one hand and national health planning on the other. Planners in the ministry of health or a planning ministry construct a hierarchy of health workers with highly trained physicians at the apex, descending to poorly trained and poorly paid health workers in villages, where most productive labour in developing countries actually takes place.* Planners are concerned with training manuals for literate school leavers and diagnostic flow charts which can be used with rapidity and impersonality. Ideally this hierarchy, especially at the lowest level, will function with rapid computer-like logic and efficiency. This kind of planning has a perspective; a point of view. Services, training, supervision, drugs, building materials, vehicles and petrol are allocated down the system, from central government to provinces, districts and villages. In the ideal plan, downward flows are somewhat complemented by statistics for evaluation and replanning flowing up the system.

Health services conceived and planned in this way have a rational-legal legitimacy in the Weberian sense. Plans and administrative procedures arise from expediency, from rational values, or both. In national health planning they arise from expediencies caused by limited health funds and from rational values of Western science and medicine. For Weber, the purest exercise of rational-legal authority is through bureaucratic administration. Staff is ranked by status. The staff's competence is enhanced by a systematic division of labour, each worker knowing his or her separate role thoroughly, the whole integrated bureaucracy functioning with impersonal efficiency.

Bureaucratic administration and medicine share an orientation based upon the methods of technology. It is an orientation in which the systematic application

of organized knowledge to practical tasks is achieved by forcing the division and subdivision of any task into its component parts. In administration this expertise resides especially in the 'technostructure' [1]; in medicine it resides especially with specialist clinicians, supported by laboratory scientists. It is a method of proven success, and the discovery of effective drugs has perhaps led some to view health care as curing, without reference to whole social persons. In planning and administration one consequence of efficient technological divisions and specializations is alienation, or not 'caring'.

Weber is very clear in his view that in the interest of efficiency spontaneous 'community action' is always inferior to 'societal action' which is methodically ordered. Bureaucracy is the means for converting community action into rational function [2]. Although Weber was constructing an ideal type based upon a kind of rational legitimacy never found in pure form, his construction has become a tenet of faith for Western-trained planners, secure in their claim for rational and legal legitimacy for their work. However, there are other kinds of legitimacy as we shall see.

Health services in Africa often fall short of the WHO/UNICEF goal of primary health care for all [3], especially for the rural sector, for many reasons. National wealth is finite and there may be few funds in an absolute sense. Or, the ministry of health may be in a weak bargaining position against the ministry of finance. Navarro [4] has argued that Third world countries do not have a shortage of capital in an absolute sense, but large quantities of wealth are diverted to ends which are neither productive nor designed to meet basic needs throughout the country.†

When a country genuinely seeks to extend primary health care, the assumptions of a market economy often shape the advice international bodies give, and the solutions national physicians and planners adopt. For example, drug imports put a heavy strain on the national balance of payments [5]. As a solution, indigenous medicines are seen as raw materials from which chemicals might be extracted for national use [3]. Chemicals will be extracted with technological apparatus, separated from all therapeutic ritual to practitioners and patients alike. They become a product. Once medicine becomes pills, local people

* Senior physicians, usually with a high level of technical training and specialization, are often the planners within a health ministry, or their views and behaviour can effectively override the work of lay planners.

† See also Golladay F. L. and Liese B. Paying for primary health care: mechanisms for recurrent financing. In *Health Policies in Developing Countries*. Monograph 24. Royal Society of Medicine, London, 1979.

no longer command the meaning of those medicines and are made more dependent, a trend some have wished to reverse through community action in health care [6].

Some of the literature on drugs in developing countries suggests self-help [7], but most is concerned with the 'problem' of poor countries not having a petrochemical industry, byproducts of which can be used for synthesizing drugs with precise quality control. At the root of these discussions is often an assumption about professional expertise and village ignorance. However, with many common diseases such as diarrhoeas and malaria, people are able to monitor the states of their own bodies and adjust dosages more accurately than a doctor in a district hospital or a village health worker could do for them. But on-one in the planning process comes forward to advocate the growing of cinchona trees in every kitchen garden or village common. Where cinchona trees do grow, people remove the bark and treat themselves for malaria [8]. This rendering of plants into remedies by village people is socially as well as medically functional in that it fosters confidence and self-reliance, where a top-downward health system based upon rational-legal bureaucracy is dysfunctional at the bottom because it fosters dependence and lack of initiative in preventive and curative health care.

Perhaps the most profound fault in the current literature on drugs in developing countries arises from a westernized assumption that people can purchase health passively [9]. People in rural African communities are wiser, with rich, full concepts of well-being. They know well-being to be embedded within networks of intellectual meaning and social interdependence: networks which must constantly be reexamined for meaning and expressed in rituals of healing and social reconciliation.

On the one hand, top-downward health planning is shaped by Westernized assumptions of efficient individualistic mechanistic function, and on the other hand it is constrained by financial and political exigencies. For example, governments cannot ignore the demands of their own urban sector. It is a near-at-hand aggregate of influential people with a strong political voice. The urban elite demand good curative hospital services, and so a single teaching hospital may consume more than half the total health budget. Because of an urban bias in planning throughout the third world [10], only a small fraction of national wealth is allocated for primary health care at the periphery.

Although bureaucracy as an ideal may be efficient, in practical application in Africa the district medical officer often feels abandoned and demoralized at the periphery. A solution is to devolve more planning and management responsibility downward to district level. However, the political reality is that many African governments do not have a very firm grip on their periphery and in political terms cannot afford to devolve much authority. In some instances politicians

at the centre need to bind political clients through the deployment of funds, such as health funds. Thus some governments are constructed largely as a network of patron client relationships, the centre binding the periphery to itself through asymmetrical reciprocities [11-13]. Allocation of health care resources is part of this highly personalized system, far removed from the Weberian ideal of rational-legal legitimacy expressed in bureaucracy. Only hierarchy is preserved.

Hierarchy may even 'float' without functional ties to poor rural communities in cases where the communities do not wish to participate in primary health care programmes. Villagers may be profoundly wary of anything proposed by government officials [14]. Or some communities may be destructively factionalized by party politics played out at village level, with 'health' being a political resource in the game [15].

On an equally pragmatic level of analysis, Westernized urban planners either genuinely do not know, or seek to confirm their elite status by professing not to know, what traditional practitioners are doing at the periphery.* In a field guide for articulating traditional midwives with national health services, WHO provided sample questionnaires that might be administered to traditional midwives [16]. The faith that a questionnaire can plumb the depths of midwives' wisdom and local status is touching. However, that kind of evaluative effort seems a rather anachronistic solution, more appropriate to some colonial past. Why not just invite traditional midwives and other practitioners to be part of the planning process from the beginning? If pure top-downward planning persists it will continue to be often culturally inappropriate at the local level, will not work as intended, and be largely a waste of the limited resources for health that the country has.

LEGITIMACY AND THE CONCEPT OF APPROPRIATE HEALTH CARE

People invest legitimacy in the healers to whom they turn, whether they are scientifically trained physicians in state or private bureaucracies or traditional practitioners. In seeking legitimacy in healers, people reassure themselves that the system of healing has meaning and they can undertake the quest for health with conviction. Practitioners have legitimacy to command patients' 'uncoerced obedience' to the system they represent [17].

Rational-legal legitimacy arises from the ideal of a society maintained through impersonal, efficient procedures. But rationality is not exclusive to the Western scientific tradition. Ethnographic literature often contains descriptions of empirical observation and hypothesis testing in small-scale rural societies [18], and a case can be made for pervasive rationality in all societies once we clarify our terms [19-20]. However 'rural rationality' is not necessarily expressed in bureaucracy.

For Weber, there are three types of legitimacy:

- (a) rational-legal,
- (b) traditional, and
- (c) charismatic.

Any discussion of traditional practitioners might benefit from consideration of the latter two types.

* This is more likely to be the case for older professionals trained abroad. Many young doctors, trained in their own country or region, are much more comfortable with their cultural roots.

Traditional legitimacy develops through time as qualities of merit, valour and holiness become associated with a corporate group such as a lineage or sodality. In the African context, traditional legitimacy is often associated with the wisdom of ancestral time. 'Uncoerced obedience' arises from personal loyalty to those recognized as the heirs and bearers of legitimacy.

The third type of legitimacy, charismatic legitimacy, is analogous to the idea that God and His manifestations cannot be anything other than pure legitimacy. People of exceptional heroism and sanctity present a vision of hope and health. Believers follow in obedience to attain those goals. They have personal trust in the extraordinary qualities of the healer and his or her revelation.

Paradoxically, a medical system based upon traditional legitimacy may have more flexibility to respond to changing conditions than one based upon rational-legal bureaucracy. In the latter, people are loyal to the rules. But with traditional legitimacy the obligation of obedience is based on personal loyalty, free from cumbersome rules. In the case of traditional healers, as long as their action follows what Weber called principles of substantive ethical common sense, they are quite free to innovate. Their patients follow the regimen out of personal loyalty. Change does not come from legislation. Rather, it is claimed to have always been in force but only recently to have become known through the wisdom of the healer.

Charismatic authority is potentially most flexible, even revolutionary. But it has the drawback of being unorganized and not amenable to replication or to systematic administration over wide geographical areas or through time. When charismatic authority becomes organized the system has transformed into one of the other types of legitimacy.

Most indigenous healers in Africa enjoy traditional legitimacy. For example, midwives in Sierra Leone are officials in Sande, a women's sodality commanding wisdom obtained in ancestral time. During initiation ceremonies, when girls become women eligible to procreate, the ancestors become manifest as masked figures [21, 22]. Some healers and carers are charismatic figures. But the point to be stressed is that traditional and charismatic healers have no less legitimacy to practise than those trained in Western biomedicine. How effectively they practise will depend to some extent upon national and international politics.

I have referred to 'traditional' practitioners and the 'traditional' medical system because I wish to link them with Weber's concept of traditional legitimacy. However, I do not intend 'traditional' to mean archaic, unchanging sociocultural relics from the past. Herbalists often add a wide range of commercial pharmaceuticals to their healing repertoire, and midwives who have been through a training programme may use new therapies, techniques, and perhaps even new equipment from a UNICEF kit. Those who have been to school may have new conceptual models of disease transmission and prevention as well.

THE ARTICULATION OF WESTERNIZED AND TRADITIONAL SYSTEMS

Having established legitimacy for the 'uncoerced obedience' of people following an indigenous medical

system, let us return to the question of national health planning. Aspects of Western medicine are clearly superior. Far fewer babies will die of neonatal tetanus if the umbilical cord is not dressed with earth or dung. Herbalists who buy antibiotics and other drugs from pharmacists or traders will clearly benefit from more knowledge about the therapeutic powers and harmful side effects of the drugs they prescribe [23].

Seldom does an African traditional practitioner automatically inherit his or her office. The practitioner's status is largely achieved, not ascribed. Practitioners therefore have a vested interest in learning selectively from western medicine, to improve their effectiveness and therefore their following. The allegations that indigenous practitioners are closed-minded and conservative is seldom true.

The traditional practitioner, voluntarily seeking to augment his or her knowledge with Western medical skills is therefore a natural link in a comprehensive health system. A training programme of sharing on-the-job skills between district level health workers and traditional health workers might promote this linkage, an idea that will be developed in the next section. The district is the appropriate administrative level for linkage because it is the lowest level likely to have a hospital staffed by a doctor and a range of other skilled professionals who could be teachers. Also, at this administrative level ethnic, linguistic and class 'distance' between hospital staff and village people may be less of a barrier to constructive interaction. Ideally, hospitals or health centre staff would go to rural villages for at least some training sessions. By going outside the hospital or clinic, staff will begin to see a different range of illness and may come to appreciate the need for preventive services.

In actual practice, district health workers are quite overworked, treating the large numbers of people who come for curative services. The same staff cannot treat all who come and also work in villages with their traditional-sector counterparts. Either the numbers of workers at district level will have to be increased, or some curative services, which people very much want, will have to be curtailed. Realistically, government commitment to primary health care will require additional expenditure on health.

Genuine collaboration will require some accommodation on the part of district-level personnel. For example, if the local traditional bone-setter is demonstrably more effective, the district health workers may wish to refer their cases to him, or they may wish to serve an apprenticeship under him, paying requisite fees for learning such valuable secret knowledge. Where women's initiation societies exist, district midwives will be most effective if they are initiated members of the sodality, within the moral community of women, having a legitimacy for effective collaboration with their village counterpart [24].

Certainly not all practitioners may wish to become recognized village health workers. Bone-setters or healers of skin diseases may have successful professional secrets that they do not wish to relinquish. Spirit mediums may feel they have little to learn from the kind of psychiatric medicine practised in their country. Traditional midwives may feel denigrated by their trained counterpart, or the traditional midwife may be a substantial political figure at the local level

who outranks and dominates young educated midwives. Traditional practitioners are not only rewarded with respect but in money and kind. To be incorporated as the bottom rung in a government medical service, poorly paid and defined by the system as least professional, may be a singularly unattractive proposition. These local contingencies are a further reason why considerable discretion in planning and administration should be devolved to the district level. A centrally-planned health care system can never be sensitive enough to local situations to promote the most constructive collaboration possible.

Any collaboration must be voluntary. Requiring traditional practitioners to be licenced is a way for the national bureaucracy to control them, to bring them within its sphere of rational-legal legitimacy, but would probably drive most underground. In such a climate charlatans might flourish, where traditional practitioners have been outlawed but no adequate primary health care system has been provided, the practitioners have either worked illegally or been driven away. In these cases the first step in linking the indigenous system and the national system is to undo the damage that has been done, building a relationship of legality, public approval and respect. A WHO document [3] suggests that traditional practitioners form their own associations to maintain standards. This approach may work well for Ayurvedic, Unani, homeopathic and other professionalized groups in Asia, but the variety of practitioners and institutional contexts is rather different in Africa. Spirit mediums, for example, practice as a result of having themselves been ill, possessed, and taken within a healing cult [25, 26]. The legitimacy they enjoy is not achieved in schooling and examinations nor expressed in bureaucratic organization which maintains rules and standards. They are a congregation [27].

Some kind of healing specialists do meet with each other [28], and negatively sanction the less worthy, but this is probably the exception rather than the rule in Africa. Virtually every rural adult knows the healing qualities of a variety of plants and helps self and others. Those recognized as having particular healing expertise are usually part-time specialists. Some specialize in a very limited range of ills and their services may be sought only one or two times a year. Especially in sparsely populated areas, no group of assessor peers could be present to monitor standards, even if a list of standards could be agreed. Practitioners are assessed though, perhaps in the best way possible, by the people themselves. A practitioner who does not relieve suffering, or who causes more suffering, soon finds himself or herself 'sitting alone'.

A MODEL FOR THE INTEGRATION OF WESTERNIZED AND TRADITIONAL SYSTEMS

Health planning must necessarily originate in the ministry of health. On the other hand, one also hopes that rural people's knowledge for effective self help will grow from strength to strength. These two sets of expectations meet in the planning process when traditional practitioners become advisors at early stages of planning. In organization and implementation of health plans, the two systems join in integrated function at the district level (see Fig. 1).

In a national system, each district usually has one or more doctors and a range of other trained health workers: nurses with broad curative and preventive training, midwives, dispenser, and perhaps others. They are community workers on the leading edge of the upper triangle. Ideally they spend some of their work time outside the hospital, doing training work-

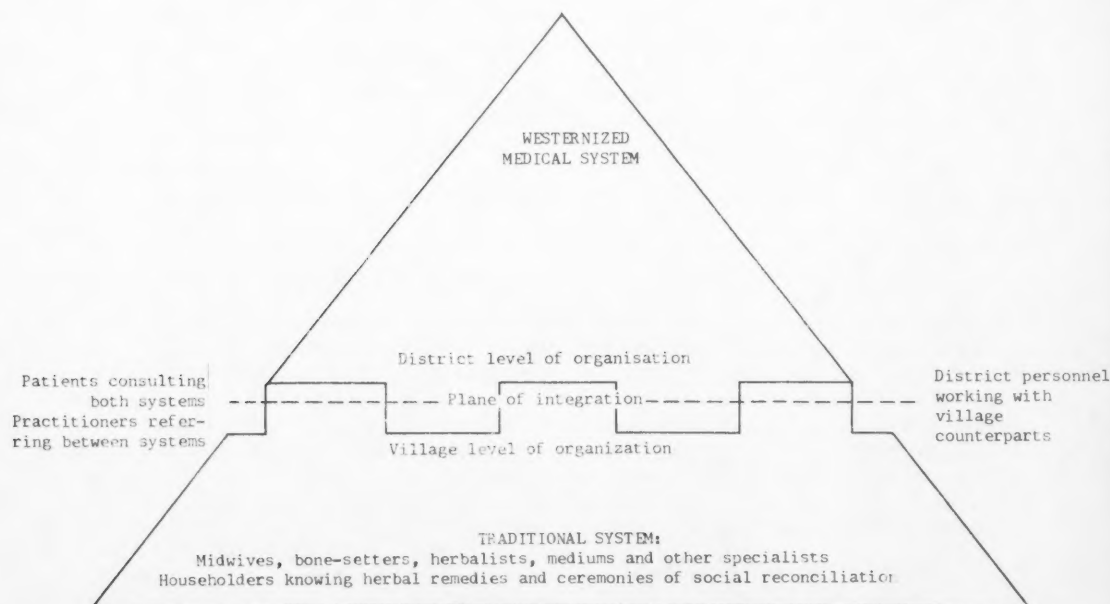


Fig. 1. A model for integration of westernized and traditional systems.

shops with their village counterparts. This is teaching by working together and does not require literacy skills or a curriculum based on abstract principles. Potentially, it is appropriate, high quality teaching if the district health workers are themselves well trained, not overworked, cooperative, and willing to learn as well as teach. It is a very labour intensive method, appropriate in countries that have not yet industrialized. In the example of midwives, all in the district could not enter in the collaborative scheme at once. Therefore, if possible, midwives in a local area might choose who will participate first and who will join the programme later.

Enhancing the skills of a range of traditional practitioners—midwife, bonesetter, herbalist, etc.—may be a better strategy than training one village health worker, especially if he or she will not be paid a full wage by government. Some descriptions of village health workers' tasks stipulate a staggering range of curative and preventive services which they are to carry out after a few weeks' or months' training.* In rural villages they are all alone, without reliable back-up from co-workers or laboratory services. They are on the vulnerable end of a limb compared with the doctor in the district hospital who may be seeing the same kinds of illness and emergencies, but with far more training and back-up. In rural villages, referral of emergency cases often is not possible where there are no roads, where transport is unpredictable, or where some people cannot afford the cost of transport to hospital.

There is also the possibility that the village health workers will be poorly supplied, or irregularly supplied with drugs. Without these essential accoutrements their legitimacy will diminish. Traditional practitioners however, have years or generations of knowledge and self-assurance behind them. They have resources in the physical and social environment to call upon if drug supplies or in-service training are not reliably supplied to the periphery.

The alternative to augmenting the skills of traditional practitioners is to train young people with primary or secondary school qualifications as village health workers. They can be taught less expensively, in large classes. Literacy allows more concentrated communication. Students are given books, told to read them, in preparation for examinations. Evaluation by written examination is cheaper and easier to organize than on-the-job supervision. The risk, however, is that this kind of education will be based on abstract principles. When workers actually go to an isolated village they may not know how to get on with the practical task of diagnosing and treating illness or initiating preventive activities. They may not remain in the village. In age-stratified societies they

may lack prestige and authority for mobilizing community activities. On the other hand, if older people with lesser literacy skills, or even illiterate traditional practitioners are trained by doing, the method of education approximates that of clinical training. It is an expensive method in labour time of the trainers and may cause manpower bottlenecks in the short run, but this labour-intensive approach may be most appropriate for the country in the long run.

Useful knowledge, the closely guarded secrets of Western medicine, must be shared out or the exercise will be a sham. Western medical knowledge comes down to villages and knowledge about useful local medicines, other therapies, and local needs and preferences go up to the planners. Linkage is also achieved by referrals going both ways, as indeed today doctors refer to the traditional sector for some ills and traditional practitioners refer other kinds of cases to the district hospital. Patients also, on their own initiative, seek help where they perceive best results [29].

With traditional practitioners thus voluntarily linked with a national health care system there is potential for constructive planning from the bottom upward. Practitioners' therapies usually involve talking with patients at length, understanding their hopes and fears. Most, with the possible exception of 'modern' herbalists [23], treat whole people embedded in human society. In planning maternal and child health services, for example, when traditional midwives are in the planning process at the beginning, plans—especially for preventive measures—have a better chance of being culturally appropriate, feasible to implement, and actually carried out at the local level. If the plans are *their* plans, traditional midwives are more likely to implement them. If they are excluded from the early planning stages they have tremendous influence for obstructing implementation. But to fully absorb the traditional sector into a national health system would destroy some of the best aspects of its caring services. Traditional midwives for example, give such a wide range of services that they cannot be integrated into a health service that measures performance in terms of efficiency. Too many of the services they give are outside the job descriptions of medical services conceived in Western thought [24].

The traditional sector can maintain its autonomy by practitioners continuing to work on a fee for services basis. They are people deeply embedded in local social networks and are not likely to exploit their patients. If they attempt to exploit, patients will simply turn to someone else, as they always have. Because traditional practitioners know so much about their patients as social persons, they are able to adjust fees without bureaucratic means-testing. Traditional practitioners may be offered an additional stipend for collecting statistics (or seeing that a literate member of their household keeps them), or for attending planning and training workshops, but they should not be given full salary as a device for controlling their activities.

Finally, the traditional sector must remain autonomous and only loosely integrated with the national health care system as an alternative should the planned national bureaucracy become excessively inefficient or corrupt.

* The WHO/UNICEF report, *Primary Health Care*, suggests that primary health care services "will include at least: promotion of proper nutrition and an adequate supply of safe water; basic sanitation; maternal and child care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; education concerning prevailing health problems and the methods of preventing and controlling them; and appropriate treatment for common diseases and injuries" [26].

CONCLUSION

Now, after decades of ethnographic field studies, we know more than Weber could have known about the practical implications of social systems based upon traditional legitimacy. Because of his admiration for Bismarck's Germany, and the value he put on efficiency, he unequivocally chose bureaucratic 'societal action' over 'community action'. But the vitality for effective self-help resides in community action at the local level. Indeed, new Western medical knowledge is actively sought because of its observed efficacy. But any village which accepts it, bureaucratically imposed from the top downwards, is in risk of losing its soul. Western medical knowledge can be liberating and revitalizing, engendering optimism and strength through self-help, or it can engender dependency and passivity [30].

This model has suggested a solution which maintains both traditional and Westernized medical systems in a symbiotic relationship where the two are loosely linked and neither controls the other. One continues its emphasis on technological methods for successful curing of certain complaints, and the other continues to follow traditional—but changing—wisdom in restoring a sense of well being to whole people in social groups.

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VI. ISSUES AND FINDINGS

Section I introduced the issues. Conference centred on the nature of alternative logics in African medicine and health; on the reasons for and contexts within which these logics are utilised. It was also much concerned with the aptness of different models, or parts of them, within such contexts and, in particular, with the extent to which it might be analytically feasible and rewarding to use either a 'pathology-oriented' model or a 'health and wholeness' model (or some combination of the two) in understanding the range of medical beliefs and behaviours. Finally, it attended to the manner in which understanding of medical cultures might be applied in contemporary health promotion and care campaigns. The papers have addressed many of these issues in extensive detail and rewarding variety. This concluding section offers selections of the debates that contributed not only to illuminating the issues, but also to redefining and sharpening them, and in a few instances perhaps to resolving them.

ON 'THERAPEUTIC SIGNS' AND 'EXPERIENCE'

The papers and the debates sparked with many examples of various types of relationships between the 'therapeutic sign', to borrow Mudimbe's felicitous phrase, and experience. For so seminal a relationship there was a wide range, and mention was made of causal links, semantic links, of semiotic, symbolic, indexical and iconic signs; and of psychoanalytic and analogical references. There is no need to repeat here what the papers have so richly covered. Two orienting comments convey the spirit of discussion on this issue. On the one hand, Professor Bates, a medical historian, heard key terms such as 'classification' and 'causation' being used too loosely, and gently chided us:

...there's some benefit to distinguishing between nosology and classification....Historically it's been horribly confused...but it seems useful to think of nosology as description of illness or disease which may be in the individual or in a group of individuals. It implies nothing particularly about the ontology of the illness. Classification is quite a different enterprise of hierarchical arrangement of terms.

Generally, the eagerness to grapple with first principles of epistemology, ontology, and classification, and the links between elements in these systems, reflected the conviction that African thought, as thought anywhere, is amenable to understanding in universal terms. So on the other hand, Mudimbe, a philosopher and writer, agreed with another African philosopher, Wiredu, in rejecting 'unique' and 'traditional' African thought that allegedly defies understanding in scholarly terms. He wished to put to rest the myth of the 'two Africas':

...the one, an urbanized Africa submitted to *modern rationality*, Western values and manners; the other, an African bound in ancient customs which it is now fashionable to call '*traditional*', but which is fated to disappear before the former...and which, in the logic of social exchange...is defined by its absolute symbolic purity...

As if in vindication of Mudimbe's caveat, conference discussion devoted much less time and had less disagreement over, neat extensively researched symbolic syndromes such as witchcraft causation or psychosomatic affliction, than with the other end of the spectrum of therapeutic signs: 'natural cause'. One important debate saw conference participants comparing notes and analyses on so-called 'natural' sectors of therapeutic systems.

NATURAL CAUSE IN AFRICAN THERAPEUTICS

In the first session, a rereading of Evans-Pritchard's classic, *Magic, Oracles and Witchcraft among the Azande* led to a wide-ranging discussion of the issue of natural cause in African medical thought. Janzen argued it had been systematically misrepresented and misquoted to a generation of students so as to eliminate from African thought the importance of something like natural cause, or at any rate, non-mystical interpretations of misfortune. The importance of this issue is reflected in reports that Western-introduced scientific notions of causation have been absorbed in African schemas precisely at this point.

Conference discussions raised questions both about the definition of 'natural' in African thought, and also about the thicket of definitions which 'the natural' had received in centuries of Western thought. In this connection, Meyer Fortes offered a helpful scheme for definition:

there are three central meanings of 'nature':...nature in the sense that those things that are evident, by which we can say that a *material object comes from an invisible spirit*; then there's nature as the *existing phenomena which are around us*, by which we say, "well, the spirits aren't there; they might as well be part of our natural environment." There's the special conception of *nature as somehow rule-bound or law-bound* and impartial. As one listens to the discussions about natural and non-natural causation, one slides between these quite different senses which belong to the history of the concept and its changing name...Insofar as one says that Africans have a concept of natural causation, well clearly, if you're saying 'do they have a concept of law-bound regularities, which, as far as we know, always will take place?' given the familiarity of causal factors that choose to intervene or not, we create a different set of possibilities...Is it that we are asking 'do they think the forces are about them as well as part of the existing order and go forth from there?' Or are we saying 'there is

some difference of essential inborn nature?' An answer to the question 'do you have a concept of natural causation?' depends on these very different senses you understand by the term 'natural'.

Steve Feierman, just back from a year in the field in Tanzania, sought to clarify the meaning of 'the natural' in another way:

...one of the possible confusions here is that so many of us have been working on ethnographically dissimilar areas. What we're doing is translating ... 'illness of god' akin to natural. What it might be, in the original, is something closer to illnesses which aren't caused by human intervention, a kind of *residual category* rather than something having to do with nature. And that means we need to ask a question about [Janzen's] use of 'natural causes' [... to the effect that] hospital medicine gets absorbed within this distinction between illnesses caused by human intervention and illnesses which just happen—very different from 'law-bound'—and that hospital medicine falls into the category of things, of illnesses, that just happen and are not caused by human intervention. It seems to me as though we may be dealing with hospital medicine as too uniform and coherent a thing. People have enormously different responses to treatment which involve the dispensing of medicine and treatment which involves surgery. They somehow treat surgery as a special category, maybe something which these 'other' kinds of doctors do, which nobody else knows how to do, and which is a radical intervention into the human body.

However, later on, Jean Comaroff sought to 'de-ideologise' the issue of natural causation in African medical thought by describing the circumstances in which it was superseded in sickness episodes, as she had encountered it in her work in Botswana.

I think we have to do better than make this a residual category as it always has been, because in terms of the therapeutic alternatives that this contrast implies, it's really peripheral in saying what's really going on. It's been part of the discussion of African systems of thought and their logic and this has been important to understand; but it also relates very importantly to the issue of 'God' and 'Man' illnesses. That is, what these kinds of illnesses we talk about rather casually as 'natural-caused' are those that have to do with common sense ... It's when people have a sense of losing control on a technical level that they begin to look for a wider causal explanatory theory, and they look then to the social and the moral domain. So it relates very directly to our concern about sickness, illness behaviour and what people are actually doing. In fact, it's been basically handled as ideological, but it doesn't need to remain there at all.

Christopher Roberts, speaking about her work among the Tabwa of Southeastern Zaire, amplified the importance of the context of the illness in determining or interpreting its causes.

The question of the origin of the illness, whether it's 'natural' or 'unnatural' does not occur at the level of classification or diagnostic categories and that's why you can't find a list of things that are natural or unnatural. It occurs at the level of *specific illness in time*, so that any instance of illness can be 'natural' or 'unnatural' depending upon the circumstances in which it's found, and that's precisely what the whole question of etiology refers to: the socio-historical circumstance of the illness.

She went on to show how the interpretation of an ambiguous sickness situation depended, for the Tabwa, on clarifying which 'level' or 'order' of reality was manifesting itself.

The other thing that's important to me philosophically in what we are talking about is the issue of different levels of orders. When you have this kind of question of etiology, you're talking about one order that somehow is breaking through another. People sense that there's something unintelligible going on in the situation, that there's another consciousness making things function in a certain way and they want to understand what that consciousness is ... The whole point of going to a diviner is to have him put into words, and therefore resolve, this underlying 'otherness' that is breaking through the order everyone sees.

Roberts also emphasised the subtlety with which orders are seen to interpenetrate; and the role of humour, and the importance of maintaining some ambiguity, some freedom, in life.

There are certain people with whom you joke about being a sorcerer, and it's a kind of categorial joke in relationships; the funny part is that some of them really are sorcerers, and that they're not allowed to be infuriated with you because of that. So there's a sense in which wit and teasing permit one to hit the mark while appearing to be blind nevertheless. What makes it poetic to me is that there are all these levels, they're functioning at once ... and it's only in certain situations that people actively seek resolution. Otherwise, they want as many levels as possible because that is how, in this kind of society, freedom counts.

Feierman perhaps most clearly expressed the practical side of the dichotomy on therapy:

With reference to classification, I found it extremely useful to have Christopher's and Jean's explanation about people finding explanations of a single thing on many levels at the same time. People treating symptoms and treating the social situation both at the same time.

Most of the commentators who saw the 'natural'/'non-natural' dichotomy as an important contextual concept had experienced it in Bantu-speaking societies such as the Tswana, the Shambaa, the Tabwa, the Kongo. Janzen noted that it seemed to be a rather old and basic characteristic of thought in Bantu-speaking societies, as seen by its presence in the Loango coast expedition writings from 1870, before modern medicine set foot in Central Africa. He also observed that:

[the dichotomy] is part of a very resilient dimension of African medicine and therefore it reflects the sophistication and the depth of this framework that appears to have survived many attempts at change and reformulation; it seems to offer practitioners as well as philosophers and laymen a way of accounting for an entire universe of issues, namely misfortune or ambiguity. If you don't, or can't, explain it on one side of the dichotomy, you can always go to the other side. It's a

completely adequate universe of explanations at a quite abstract level. The theoretical issue here is that it helps us deal with this unruly pluralism of the non-systemic variety. But my question is whether it is more widespread than the Bantu-speaking societies.

Bernard Greenwood who had worked in Morocco, where Greek/Islamic medicine co-exists with continuing traces of Berber medicine, pointed to some basic differences between that pluralistic medical culture and the Bantu medical culture.

I wouldn't say there are levels [in Moroccan medicine] between 'natural' and 'supernatural'. There are a lot of cases in which the causation is natural, in which there is something that the relationship between cause and illness—in time or space, or an interior relationship—is seen in a material sense. But when a [diagnostician] chooses to look at something as a supernatural cause rather than a natural cause, he's going to say that the supernatural agent is causing these natural things to connect. They don't say that the supernatural illness is the supernatural agent. It's the same level of causation. In the one case the illness is too much sugar, in another it's a spirit.

One conference participant was concerned that the rush to find and define natural causation in African thought did not obscure the emergence, in recent decades, of new kinds of 'spirit force fields', represented by many new kinds of religious and therapeutic institutions. Historian Terence Ranger, who has written and edited works on religious history in Tanzania, Malawi and Zimbabwe, asked the conference to consider the religious pluralism of the Shona as an analogy of medical pluralism.

[In a particular area] you have traditional manifestations, spirit churches, and different kinds of missions... what is the popular religion of the Shona? We cannot take it as any one of these things but it's a total spectrum of all of them...

Comparing his information on Shona religious fields with Comaroff's material from Botswana and Murray Last's from northern Nigeria, Ranger noted the importance of transformations at greater levels of scale and inclusiveness than at that of particular spirit forces alone.

So, for example, it seems to me difficult to say that spirits have 'fallen out' because they appear in the Islamic *jinn* part of the system just as they haven't 'fallen out' of the Shona system because they appear in the spirit church part of the system, or they have not 'fallen out' in Feierman's Shambaa village. So it might be defensible to look at this as a field of force that results from choice, rather than to carry these same systems as one which is bound to win out over others, of which some are decaying in some kind of incoherent way... [In these cases] one is importing very different techniques or different mechanisms of exorcism and different evaluations of what is the patient/spirit relationship. So you have yet a more complex field of force within which you make predictions.

Andras Zempleni, who has worked in numerous West African settings, offered in the form of a question the most succinct resolution of the problem of natural cause.

... do we have the right to speak of 'natural cause' in African medical systems? If, as in the Moroccan system and in other systems, we do not have a theory of natural causation, as we have a theory of supernatural causation, is it conceivable to speak of natural causes without having a theory of natural causation? ... my question, more precisely, is to know if we have the right to speak of, to use the term, 'natural cause', there where we do not have a *theory* of natural cause?

THE POSSIBILITY OF A TAXONOMY AND ETIOLOGY OF HEALTH

If the sharper characterisation of 'natural' causes, and the concern for better understanding of 'expanded spirit force fields' in disease received extensive attention in the Cambridge conference, the challenge to consider causality and classification of health also received widespread comment, especially following the first session in which the inclusion of 'health' in a domain of a study was proposed by Janzen, Prins and Mudimbe, and refined in his comments by Gilbert Lewis. At first the idea of including 'health' within the domain of study was rejected as unrealistic. Bibeau, for example, remarked:

A 'normative well-being' model [title of session] sounds very idealistic. I am not convinced it is really possible to use the well-being health model in talking about health in Africa. It may well be possible to give a good description of health related behaviours about food, housing and other behaviours. But for a long time yet, anthropologists and historians will have to approach health problems in the 'negative'. We are obliged to use this because as far as I know in African societies the ideology is that you do nothing if life is going well. If you have no problem, you go ahead without any intervention. I mean that positive ritual actions are not so numerous as other actions. You're obliged to start when there is any problem within the community... then we are obliged to use that 'negative' approach. Why move in another direction and propose to build a health model when we are just starting to organize the internal logic in the disease model? We are just beginning to grasp new ideas within the African medical system itself. There are still so many problems to solve, to understand how the pattern is organised.

Jean Comaroff responded to Bibeau:

While I agree with you that there's not really much about by way of positive practice that can be pinpointed and is directed toward well-being, I think we under-estimate what is there. We tend to isolate out for example healing practices from the total ritual space in many African societies, when in fact rituals of health do occur and are part, at least in the society where I did my fieldwork, of one notion of ritual efficacy. So even though one is not dealing either in African societies or, in that sense, in our own with a positive alternative of equal weight semantically when one looks at health, nevertheless one is making one's comments about illness; if you like, about disorder as opposed to order. And one is using some measure, or index. And in many African societies in fact there are words—not necessarily to mean health in a physical sense, but—like, for example, 'coolness'; and they are related very much to a state of a relaxed spiritual balance:

the more general but not necessarily explicated idea of what it means to be in harmony with your environment. And this leads me to yet another point... It's very difficult in this kind of context to set aside what constitutes the domain of healing from what constitutes the broader domain on ritual and religion. In a sense then, by extension the whole cultural logic of the society is what we're looking at, the entire semantic system.

In discussions that followed these two comments by Bibeau and Comaroff—the first wishing to retain sharply-focused analyses of disease and therapy terms in a cultures the second gingerly accepting the possibility of, and then exploring, a semantic analysis of a health domain—other discussants examined the problems and potentials of studying 'health' models. Some were interested in understanding health in terms of ecological adaptation, both short and long-term. Others were concerned that such an approach might negate or minimise the conscious, actor-centred model, giving the individual the freedom to initiate health or therapeutic actions from a consciously-held set of principles.

The first idea was advocated by Bibeau, some time after venting his initial pessimism about studying health models.

I would like more information on the relation between the health model and the ecological framework. I mean if we are to study the relationship between a population and its health in an ecosystem like that of the Kalahari, then it's possible to add a few indicators of good adaptation. The problem is not at the level of mechanisms or processes of adaptation. I'm not talking about long-range adaptation, even the everyday adaptation of life—e.g. to get water and waterborne diseases and such like. But if we are to look at the indicators we have in hand today expressing good adaptation, are they not still a lot of the time negative? I mean the mortality rate, the morbidity rate, increase in population. We are obliged to come to the medical system through the door of illness and death. So what exactly is the place to put the relationship between a health model, a well-being model and this ecological framework?

Ranger's queries about Janzen's paper concerned the long-term adaptive picture of a society, and the relatively short crisis or transition periods depicted between them: i.e. the move from hunting and gathering to cultivation agriculture, early industrial capitalism with the advent of colonialism, and more recent post-independence periods, all of which have been demonstrated to have been accompanied by disease flare-ups disrupting previous adaptive balance.

I have a number of historian's doubts about [Janzen's] paper... A good place to start off is with the Bushmen, because one of my doubts is with this very long period of time that's required, and in a sense given, between your crises for evolutionary biological adaptation. You say that the Bushmen have moved into the Kalahari environment to escape from the pressures of agricultural society... Among the problems I have with the account of the Bushmen is... one doesn't know—I don't know anyway—how long the Bushmen have adapted to that particular environment, but supposing they were sitting in the environment that agriculture had pushed them out of, how different would one predicate Bushmen notions of health or disease than what they are?

This leads me on to a more general point about the model of cumulative adaptation and the sudden crisis. [Janzen] offered us two crises, each with centuries for readaptation. One of the crises was the initial transfer to agriculture and the second was the early colonial crisis. I don't wish to propose any candidates for intermediary crises, though I'm convinced one could do so. The point I want to make is that if there was a crisis of colonisation is this whole realm of health, we are now encountering a crisis of decolonisation. Anthropological studies of adaptive systems are catching them between two very closely occurring crises. This bears on the whole question of the degree to which many of the papers [of the conference] are still rather 'closed system' papers and need to be opened up in that way.

A final point I make as a historian's comment is that I'm not happy with [Janzen's] diagram (Fig. 2), with the notion that we have the very slowly changing core constructs above the line [describing etiologies] and the much more flexible therapeutic practices below the line. I don't want to raise the broad historical questions about that, but in particular I was worried about the notion of the [health] utopia. It seems to me that within Kongo society and other societies the constant reference back to the health utopia is an attempt to shift the balance that's in the diagram above the line from natural diseases... to ancestor diseases, spirit diseases, witchcraft diseases... The utopia is a model, where there's no medicine or at any rate the kind of medicine that's appropriate to 'natural' diseases. And the utopian movements, at any rate in modern times, set out to change that balance within the spectrum rather than to reduce it...

Janzen responded to these doubts, and to other questions about the usefulness of a notion of health 'utopias' (Köhler's term):

In the interest of accuracy of the data, I'll refer to the Kongo case in answering on the usefulness of the health model. What is very compelling there is [the fact that] what most people regard as the time of deepest crisis [earlier in this century], when the epidemics are raging and authority structures are being overturned and the economic system is being totally revamped and taxation is being imposed, that is when people do two things: they throw out the medical system and they start creating utopias. Judging on that one experience, I'm led to infer that you need an analytic model of positive society, some sort of analytic model of what is going on in the society. Now certainly to do that doesn't deny that there is a crisis; and one is not turning one's back on a critical study of the reasons for the whole transformation. I'm simply talking about the way we go shopping for explanatory models, and if you have this kind of transformation going on within a society, then the explanatory model ought to move along with these transformations and not against it.

In an intervention addressed both to the pertinence of the study of health models and to that of the need to recognize in one's generalisations, conscious, purposive action of individuals, Steve Feierman offered a number of important points.

In a kind of ideal state, the point at which we must all be nearing in terms of what kind of history and what kind of sociology we ultimately write, is one in which there are modes of culture which we know about through disease and therapy. There's the study of medical pluralism and there's a study of the unintended consequences of change of people who have changed their lives. What worries me about all of these... is that it's a picture of society which places

overwhelming emphasis on forces and patterns of action and knowledge over which people are not trying to exercise conscious control—that is, it doesn't involve conscious, purposive action... You're dealing with the consequences of purpose action but somehow not giving the people credit for taking purposive action on their own lives. It gives you a very peculiar picture of change.

In some ways Janzen's mention of the *ngoma* drums of affliction (see paper) helps to provide a bit of a way out for people to behave in new ways, to take new steps, to aim in new directions; while in the language of the culture, so to speak, there is some purposive individual behaviour. This also returns to Ranger's point, because the adaptation seems to be that very long-term adaptation which takes place without people being very aware of what's happening, of how things are changing. Whereas what Terry [Ranger] has been saying is that there are sometimes very immediate, very real crises with which people must deal and they deal with them in purposive ways; and some of the ways in which they deal with them are successful and perhaps become longer-term adaptation.

It was at this point in the development of the discussion on an etiology and a taxonomy of health that Andras Zemleni and Don Bates deftly brought the loose ends together. Zemleni noted that in his work in African material, just as in the classic medical traditions of Asia and Europe, it was impossible to have an etiology of health related to social order without at the same time relating it to an etiology of illness. Bates (in a comment much of which has been cited in the introduction to Section II) noted three levels of health: positive health, health as the absence of illness, and illness. All three concepts could usually be found in the analyst's constructs as well as those of the people analysts observe. But the content of positive health, he noted, varies considerably from society to society. In ancient Greece there were debates about health, the regimen one needed to live by in order to avoid illness, and the like. But wherever concepts and practices of positive health may be found, they logically presuppose an understanding of what disease is.

ON IDENTIFYING THE SALIENT FEATURES OF A THERAPEUTIC SYSTEM

Several conference participants warned of a tendency to over-systematise and over-classify the therapeutic. Mudimbe urged us to take seriously the element of 'passion' (*désir*) in the therapeutic encounter. Bates, Feerman, Helman and again Mudimbe cautioned against ignoring the individual's perspective in the rush to find a cultural classification. The general point of 'fine-tuning our' analyses of therapeutics was perhaps best made by Murray Last in a discussion of papers by Greenwood, Sindzingre, Staiano and Sussman. Our studies of medical systems should reflect what is salient, efficacious, and vital in practices and thoughts. In his inimitable manner, Last conjured up one of the most memorable metaphors of the conference: the '2 CV Citroën clutch':

I would like to know, in the papers presented how important are certain aspects of the logic of the diseases, illnesses, interpretations? I'm asking when you draw a classification system, a taxonomy, maybe even an absurd one, is it possible to give weight to certain parts which replicate the ways you observed in the field? As a British Anglo-Saxon empiricist on the wrong side of the border, it seems to me empirically that certain stages of a logic are more important than other stages. I would love to produce a nice weighted system rather like the clutch of a 'deux chevaux' [Citroën car] which, as it were, the faster you rev it, the tighter the clutch becomes. No one else has thought about it, so let the French produce it for a logical system too. The more dramatic it's presented, the tighter the varying points are...

Linda Sussman's paper nicely points out that something like 168 of her cases all went in one direction (see Sussman, Table 2)... What I'm suggesting, then, is that one wants to know more about how frequently does illness classification, or parts of a classification, come up in practice? That's extremely hard to do. In my own work, that is where there are children who more frequently get ill, certain groups talk about it more frequently, certain treatments occur far more frequently at certain times of the year and that will depend on how much money there is. I mean, there's a whole realm of the aspect of frequency, and, as I said, I also argue that certain logics are more convincing than others...

Another aspect of this question of weighting: in your paper Bernard [Greenwood], I noticed that one of the things agreed was foul, was foul. We agreed it is foul, but how often does anyone drink it, eat it? That's the point I'm trying to make much more clear. How frequently do these awful things take place? And I'm not speaking of bad wine.

Another point which I see as important in connection with the question of frequency is the extent to which, or the frequency with which, certain explanations are simply noise. I don't know how often one has lived through conversations which are simply 'How are you?' 'Very well, thank you.'... a lot of speech is noise; it's not meant to mean very much. This seems to me is an aspect of weighting that can be extremely hard... What is the volume at which it is being brought up?

Then, also, in all of your papers is the whole question of translation. We have Arabic manuscripts where I work, where of course one has Arabic medicine... We have nineteenth century manuscripts that wrestle with this problem. And, as you pointed out, a lot of the plants that are mentioned in the textbooks simply aren't around. So you have, in fact, not ethno-semantics... but ethnic attempts at doing semantics. It seems to me that a great deal of the problem is resolved by the fact that, well, it basically doesn't matter that much whether you translate a word or not, whether you can translate the Arabic from that to a local form of a tree that is a little bit better. There's a whole range of problems where you know what plant you should use, and you know you haven't got it. What do you use? Doctors are doing this all the time when they can't get the actual drugs, and this whole game of translation from one system to another system becomes extremely important. It means that you have to give weight to what aspect of the plant system is to be translated.

The same applies again in [Sindzingre and Zemleni's] paper on the Senufo, namely, that given the mass of taboos, the 'barbed wire entanglements of the spirit world' strung out across the Senufo countryside, it would seem to me essential to know how important they are. Because if they aren't very important, then, okay, it's not important. But if they are important, then what is crucial is to show what sort of system of preventive medicine enables you to march through barbed wire entanglements and minefields safely. Again, in the place I lived, I worked out the spiritual geography of the place; a sort of ethno-spiritual ecology. What I noticed was that, in theory, I was constantly bumping into spirits and stars. I was 'in, like, outer space being bombarded by asteroids, but the place was alive. Everyone was walking through

with impunity. Therefore, in a sense what really concerned us was: how important are their spirit highways on which they can be run down when they cross? As a result, it was only I who eventually became excited by it. No one else seemed to mind.

These points made by Murray Last on the importance of finding the weighted centres of a medical culture, were echoed by other conference participants such as Allan Young in his emphasis on efficacy and on the creation and use of medical knowledge. His paper develops this theme adequately, so it need not be reiterated here.

ON THE ANALYSIS OF MEDICAL PLURALISM

The conference was organised around the study of causality and classification in pluralistic medical systems; that is, those with multiple healing traditions or alternative therapies. Discussions brought out new perspectives on the origins and types of medical pluralism, on the comparative study of therapeutic pluralism, and change in medical culture. Many participants shared Mudimbe's criticism of occasional reference to Horton's work on 'traditional African knowledge'. He found in those papers which tried to give content to this 'traditional African knowledge' great disparity from place to place, from reference to reference, which was misleading. One could be justifiably critical of generalisations based on such a concept. By turning to a formulation of alternative or multiple logics within the medical culture of a single society, or by looking at the medical culture of a region, one could all the better account accurately for medical practices and beliefs. Gwyn Prins formulated the issues that had emerged from Zemleni's and Last's remarks on papers by Greenwood, Sindzingre, Staiano and Sussman.

Can one compare types of pluralism? Is there any way that we can make sense of differences among kinds of pluralism, whether on political, politico-economic or demographic grounds within aspects of medical culture?... is it possible to look within a society at generations and their relations to plural therapies and then see how the transactions work themselves out in therapy managements?... what is the articulation of ideas among separate elements of medical culture in a plural system, if the system exists at all?... are plural societies better off in any way?... there has been another question which came up in a number of ways which is: we've had a contrast in approaches between fairly tight taxonomies on the one hand, and on the other an approach which emphasises codes and the logical principle of combinations of codes in loose kinds of ways. It seems there's an implicit disagreement there.

Terence Ranger pleaded for rigour in the working definition of a pluralistic medical system, saying that he had identified 'eight and a half' different kinds of systems so far! He wanted to avoid a situation similar to that in which some scholars find 'a mode of production for each society they look at.'

We need to establish some kind of ranking order or sequence both in terms of logic and process from one sort of pluralism to another. There are clues. There's the proposition in [Staiano's] paper... of the distinction she drew between plural and pluralistic. I don't know if that would be a universally acceptable one but it seemed to me quite useful... the distinction was that she refers to a system as *pluralistic* where no one ethnic or political group or medical explanation has taken precedence over another. And she refers to it as *plural* in situations in which there is a kind of hegemonic situation... this was quite a useful explanation one might feed into the African material. For example, in [Comaroff's] and [Ngubane's] papers, we heard that in their Southern African societies, the distinction was not so much between diseases of God and diseases of Man, but between African diseases and diseases which even Europeans could comprehend. Well, that seems to me to be how Southern Africans are more plural than they are pluralistic. In other words, there's a much more hegemonic pressure or might in power and ideas.

While acknowledging these distinctions, Jean Comaroff pointed to further kinds of examples that may generate medical pluralism.

We need to keep in mind the distinction between observers, and actors, models in this respect. And when we talk about pluralism, we have to be sure whether in fact we're talking about a field which appears to be subdivided from the outside but is really related from within as one repertoire, in which individuals play the field.

Or, we come to a situation where within one field you might see various alternatives, but clearly internal differentiation is taking place... out of a range of alternatives that we could identify, there are discrete forms of therapy. Very strong constraints exist on the ground which will affect emerging differentiations within the society itself; ethnic and socio-economic differentiations. So what is emerging amongst the people themselves is a clear distinction of the boundaries: that ambiguities don't exist simply as one overarching field; that within the society there are clear constraints—political, economic, symbolic, cultural—that actually pattern people's choices in a predictable way.

Prins felt that the discussion of pluralism was leading too far away from 'medical' pluralism.

I think there is a potential problem here in talking about the pluralism of a society rather than the pluralism of medical behaviour or medical culture, because there is an inherent danger in assuming neat overlaps between groups of people and their usages. And as soon as one begins to describe societies as pluralistic, what immediately emerges, just from the use of the language, is that "these people use this and those people use that" rather than patterns of resources available to them, of cultural repertoire and then transactions—through which people view things with a certain amount of flexibility. What I'm afraid of if we begin to talk about the pluralism of the societies rather than of medical culture and behaviour is that we'll introduce this kind of rigidity in the overlaps between parts of society and kinds of behaviour.

To which Comaroff replied:

Well, I think obviously one is talking about two separate levels of analysis and the relationship between the two is problematic. I don't think one can simply assume that you can produce from any kind of rigid analytical pattern of that

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kind in the behaviour of individuals. But by the same token, one must assume that there is some relationship between the overall socio-political categories in the wider society and the effects upon individual behaviour.

Christopher Roberts' interjection at this point further clarified some problems in the use of the term 'plural' in a societal and a medical context.

... as a student of social stratification and political anthropology, it's very clear that by plural you mean a population of people who were divided physically, distinctly as an ethnic group with a different culture, a different history and differential political power. The very clear implication of that is that in fragmentary societies in which people are competing for the same space, only by superior political force of a conquering group is the whole system held together. Now to transfer this kind of terminology to a medical system, the implications are that people could choose among systems that are in fact in competition in some respects with one another... what everyone's paper has demonstrated so far is that this is definitely not the case and that Africans themselves perceive these systems to be complementary.

Roberts' suggestion for resolving the confusion of connotations of the term 'plural medicine' was that another term such as 'multi-dimensional' be substituted for it, to describe a therapeutic setting in which alternative logics and medicines have their appropriate places and complement each other.

However Allan Young proceeded to give the hazy term 'plural' alternative attributes which seemed to reconcile the issue of this discussion: would one emphasize plural socio-political structure—that is, a hegemonic setting—or complementary sets of behaviours and logics, in accounting for 'medical pluralism'?

... the one dimension of pluralism is found in talking about systems, or societies, or groups of people who have alternative ideologies and alternative sets of cures for what looks to us like a single set of systems. Many of us have treated this in a rather formalistic way which is very interesting and very important. I see, in my own mind at least, a necessary first step: that is in setting out what these alternative or parallel ideologies or systems are. What I see as a second and more interesting and more important step in talking about how one is going to use pluralism is that people own these ideologies and own these cures... One of the very important elements in retaining or in transforming so-called pluralistic systems is the very conscious activity of the healers, of the owners of this knowledge and of these skills, to keep them pluralistic, and at least to maintain their own interest against the others.

Subsequent interchanges that were much less inspired by theories, but more descriptive, used the two meanings to good effect in delineating complementarity of logics and practices, as well as the hegemonistic influences playing upon medical customs when seen in a fuller socio-political context.

ON COMPARING MEDICAL SYSTEMS

In the passages which follow, new horizons are glimpsed. A perspective which is both comparative and pluralistic emerges which begins to embrace African medicine in a regional and 'Civilisational' sweep, rather than solely in local terms. Although no papers in this collection address these larger scales, we see here that it is becoming possible and necessary for future work to build carefully on studies such as this volume presents.

Andras Zempleni, in the first such passage, described the 'transformational' features involved in moving from a definition of health in Berber-Moroccan medicine, to Islamic (particularly prophetic) medicine, and then to indigenous West African medicine, a situation found in numerous societies where these systems co-exist to one degree or another. These comments were made in a larger discussion of Bernard Greenwood's paper on Morocco.

[In Morocco] we have to do with a 'hot-cold' system which explicitly defines an etiology of health. According to the classic conception, disease is a disequilibrium between principles, or humors... Conjointly, we have a second system which is Islamic, properly speaking, where the conception of disease is more clearly upon the opposition of 'pollution-purity', understood in the Islamic sense. What I have found so interesting in that [in Greenwood's paper] when he shows with the examples of the disease of *buzellum* how an excess of 'deep cold' the disequilibrium, is transformed into pollution, and how one passes from one system to another, from one opposition to the other.

When cold is transformed into pollution, we have the interpretations of the disease in terms of an anthropomorphic agent, something well known to us Africanists. Thus, if I am not mistaken about Islamic thought, disease is identified on the side of pollution, and 'health' on the side of purity, of course in the Koranic view, but that the etiology of health is no longer expressed in terms of an equilibrium of opposed or balanced principles.

To return to the initial concern, it remains to be seen around which set of oppositions such as hot/cold, pure/impure, strong/weak we can construct an etiology of health in non-Islamic black Africa. The details are clear and one of them is that George Foster was absolutely wrong in suggesting a dichotomy of 'personalistic' and 'naturalistic'. Africa does have its own concepts of equilibrium of principles or forces which need to be reconstituted to have a clear idea of the set 'health/disease', in order to be able to construct an etiology of health.

We have spoken very little... about Islamic black Africa. But in Islamic black Africa, for example Senegal, where I once worked among Moslem populations, pre-Islamic traditional therapies were sharply distinguishable from Islamic therapies by an opposition. It appears that the pre-Islamic therapies are always based on a process that consists in moving from the 'unnamed' to the 'named', whereas the Islamic therapies, by contrast, are based on the idea of passage from the 'polluted' to the 'pure'.

With Islamisation, there comes a fundamental modification, at least in Senegal, of the conception of the body and relations to the body. We see appear a technique of sensory deprivation, of asceticism in relation to traditional Africa where there is rather the presence of techniques of sensory stimulation. This is a fundamental modification in the conception of the body [with a bearing on definitions of health and illness].

In similar manner Murray Last proposed a comparative framework akin to Balandier's famous idea: not so much of the content of medical systems as of the various kinds of 'colonialism' which have given rise to medical

pluralism: how, if we examine these cases carefully, we will see that societies at first glance deemed homogeneous are, in fact, made up of colonisers and the colonised, and that often the latter develop their own version of the coloniser's medicine in the process of creating their own decolonised identity.

... we ought to look at the different types of pluralism. Yesterday we were looking at colonialism and aboriginal societies, more or less. But I'd like to point out that in Nigeria at least we have a Nigerian haematology. It hasn't been worked out what the Nigerian haematology will be, but I think there is this whole question of the decolonisation of Western medicine. We have to assume we're looking at Nigerian or Zairian modern medicine. Contrast that form of a colonial or neo-colonial society with what we have from [Staiano] (Belize) or [Sussman] (Mauritius) which seems to me to be a colonial society at the smaller level if other groups had not been brought in or forcibly imported. In no way can one really look at their medical cultures on the same terms as traditional Mauritian culture and traditional, say, Chokwe culture. The circumstances of importing are simply not the same.

I would like to move from that to ... the whole question of Islamic colonialism, which one might regloss as internal colonialism ... [Greenwood] doesn't stress much the Arab takeover of Berber society, nor the very large proportion of Bambara West Africans jumping about forcibly in the past, nor the Othellos of today (Othello is presumably a Bambara). My point is that prophetic medicine in the twelfth century ... was far more than a nice little profession. It bears a whole background of super mystical anti-authoritarianism which is something quite striking, at least within the historical context ... What I'm trying to say is that the intellectual history of this whole 'hot/cold' system isn't as neat as Galenic medicine ...

So I would like to bring up those three types of colonialism of which perhaps the colonialism of the Central Africans was the colonialism of Mauritius and the Caribbean; the Atlantic colonialism, which can be called 'Galenic' or something; and finally this sort of internal colonialism which you have, for example, from the Mende's effect on the Senufo. The Senufo as a group of 900,000, that big, clearly have attracted a vast number of people within them. The point being that these are highly diverse societies and the Senufo ... are in that middle belt squeezed from the Atlantic south. And it seems that we may well find the actual 'tight little, right little' ethnographies are not as tight as they might be ... When are we not a plural society? So we've got to work out distinctions between the types of pluralism and maybe in terms of political, economical, medical and historical backgrounds.

The third discussion about a regional African medical institution came in response to Harriet Ngubane's presentation on the *isangoma* diviner's network and their role among the Nguni-speaking peoples of Southern Africa, especially the Zulu and Swazi. It was noted that the *ngoma* 'drum of affliction' had been described in Tanzania, in Zambia, and Kongo, and that its clear role in South Africa, as a league of diviners—keepers and renewers of cosmology—showed the transformations of institution basic to the Bantu-speaking therapeutic culture of the sub-continent—a civilisational medical institution. What prompted a lengthy discussion was the reason for the *isangoma*'s continued survival as an integrated network in a setting that had otherwise greatly fragmented indigenous institutions.

Gwyn Prins suggested that there was here evidence of a kind of 'hidden history' of the sub-continent, which, if understood, might transform the conventional wisdoms; but Ranger was not so certain. Might not the *isangoma* which survived be part of the South African pluralistic (that is hegemonistic) system?

I must very rapidly be a devil's advocate ... There's a kind of paradox that here so close to South Africa ... there appears to be this greater sense of continuing cosmology than in the Tanzanian case or any of the other cases. I just wonder ... if the degree of cosmological solidarity isn't a by-product of precisely the sort of Afrikaner manipulation of identity that was being raised earlier. This seems to me to be the real danger. How can one tell whether this kind of stiffening up of the cosmology, which I regard as you're documenting, isn't part of the whole national identity process which is not only imposed upon Africans by Europeans but is part of their technique of surviving as well?

Ngubane disagreed. The *isangoma*'s continuance was not an artifact of Afrikaner policy for the simple reason that it extended beyond ethnic group boundaries. Comaroff shared her opinion of how a trans-ethnic "reality interpreting" institution might work, from her work in Botswana and South Africa.

[Ngubane] mentioned that there's a very strong pressure on middle-class urbanites. They in fact feel great tension between the Western orientation and indigenous culture ... People were aware of the fact that these things come into competition at one level and that the whole question of combination or choice becomes a self-conscious problem ... Also, in the revealing of cosmological questions, the whole nature of what constitutes illness and destruction come into review. The whole definition of people's status including poverty, political problems, the whole nature of the person and the self in context, become the subject of illness or treatment. That brings along with it a self-consciousness which cuts across ethnic divisions ...

In response to a question from Gilles Bibeau about the degree of coordination between the *isangoma* diviners and the other healers' organisations, Ngubane had this to say:

Is there any coordination between the healers in the rural setting? Yes and no. We do find rural healers invited by the urban people to come and assist them. But then they converge with these healers who are recognised by the government. They have the power, the ones with the certificates; the ones that are registered and as a result, therefore, they are the ones that are recognized as a group of people who could formally be incorporated or be consulted. Further, they're organised into a definite organisation. But it's not as explicit as it is in relation to the diviners: the *isangoma* who form small little groups whenever they have a crisis.

Then [the urban healers] come together, they form a group and are approved by administrators. They don't have a self-sustaining, self-perpetuating type of organisation like the *isangoma*. Also, in fact it's very interesting, there was this question because a group of medical students in Johannesburg felt that they needed coordination and exchange of ideas with African healers, and they went to these healers who are recognised by the administrators. They're not aware of the diviners' organisation because, in fact, no one has written about it before ...

Ngubane's paper takes us to the present frontiers of the field, and peers beyond with privileged evidence, to point to a route ahead.

It is apparent that further regional and comparative studies are needed in African medicine. These excerpts from the Cambridge conference hint at some of the conceptual and regional forms which may be congenial to such work in the future.

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Editors:

John M. Janzen and Gwyn Prins

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The African continent: countries, peoples, and major towns, cities and sites mentioned in this work. Numbers refer to key; circled numbers refer to locations of major field studies reported in papers of this work.

Key to map of African continent

1. Abidjan, capital of Ivory Coast; Abidji people
2. Accra, capital of Ghana
3. Amhara people, Ethiopia
4. Angbandi people, north Zaire
5. Ashanti people, Ghana
6. Azande people, northeastern Zaire
7. Bambara people, Guinea, Senegal, Mauritania, Upper Volta, Mali, Ivory Coast
8. Basa people, Guinea
9. Bono people, Ghana
10. Brazzaville, capital of Congo
11. Cokwe people, Angola, Zaire
12. Dakar, capital of Senegal
13. Dar-es-Salaam, capital of Tanzania
14. Durban, port city, eastern S. Africa
15. Fulani people, Senegal, Mali, Guinea, Upper Volta, Benin, Niger, Nigeria, Cameroon
16. Freetown, capital of Sierra Leone
17. Gharb people, Morocco
18. Hausa people, northern Nigeria, Niger
19. Kikuyu people, Central Kenya
20. Kissi people, Guinea
21. !Ko (Bushmen) people, Kalahari desert, Namibia, Botswana
22. Kongo people, Angola, Zaire, Cabinda, Congo
23. Lagos, capital & port city, Nigeria
24. Lebou people, eastern Sudan
25. Lozi people, western Zambia
26. Luba people, southeastern Zaire, Zambia
27. Lunda people, southern Zaire
28. Luo people, southern Kenya
29. Lwena & Luvale people, Zambia
30. Makonde people, southeast Tanzania, northern Mozambique
31. Malumfashi town in Kaduna State, northern Nigeria
32. Mandari people, Sudan
33. Marrakesh, Moroccan city
34. Masasi region, southeast Tanzania
35. Mauritius Island, Indian Ocean
36. Mende people, Sierra Leone, Liberia
37. Nairobi, capital city, Kenya
38. Ndembu people, northern Zambia
39. Nguni speaking peoples, eastern S. Africa
40. Nzakara people, northern Zaire
41. Réunion Island, off East African coast
42. Sandoa, town southeast Zaire
43. Senufo people, Ivory Coast, Mali, Upper Volta
44. Shaba province, southeast Zaire
45. Shambaa people, Northeast Tanzania
46. Shona people, Zimbabwe
47. Songhai people, Mali, Upper Volta, Benin, Niger, Nigeria
48. Soweto, black city near Johannesburg, S. Africa
49. Swazi people, kingdom, Swaziland
50. Tabwa people, southeast Zaire
51. Tswana people, Botswana
52. Venda people, Zimbabwe
53. Wolof people, Senegal
54. Xhosa people, S. Africa
55. Yoruba people, W. Nigeria
56. Zulu people, S. Africa
57. Zaire's capital, Kinshasa

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EDITORIAL COMMENT

CHANGES TO THE JOURNAL

A number of important changes to the Journal will take effect from Volume 16, No. 1 due to appear in January 1982.

1. The abolition of separate Parts.
2. The Journal will be published twice monthly.
3. Our front cover colour will remain unchanged for at least one calendar year (i.e. one volume). We begin 1982 in kingfisher blue, as we started life in 1967.
4. Some alterations will be made to our stated disciplinary and subject coverage. In addition to Medical Anthropology, Medical Geography, Medical Psychology, and Medical Sociology—all of which remain unchanged—Medical Economics will be retitled 'Health Economics' and we introduce 'Health Policy'. There has been a need for bringing closer together the responsibilities of health administrators and planners with the findings and enthusiasms of those involved in research. We hope that by making health policy an explicit content area we can play our part in helping to bridge the gap.
5. The content list will continue to appear in its present form on the outside cover but will be separated into sections according to basic discipline. The comparative length of each of these sections will vary from issue to issue.
6. There will be two new sections, one devoted to News, including details of forthcoming relevant conferences and notices of new research projects, and the second, Regional Notes. Any readers with information that may be of general interest should send the details either to their Regional Editor or direct to the Editor-in-Chief.
7. A serious attempt will be made to extend our coverage of the French-speaking world by increasing the number of papers published in French (with English Abstracts). Accordingly, we invite contributions from France and other parts of the Francophone world.
8. The policy of inviting two or three sets of comments on accepted material to appear in the same issue, with an author's(s) rejoinder, will be intensified. Also, whenever possible, papers dealing with the same theme will be published in the same issue with the theme printed on the outside cover.
9. There will be no change in our policy for special issues which will continue to appear as and when they become available but never consecutively. A strict watch will be kept on their number to ensure that authors of spontaneous contributions do not suffer long delays.

We hope that these changes will improve the service we can offer our readership by facilitating distribution and subscription details, by simplifying our structure, by extending our coverage and by increasing our topicality.

P. J. M. McEWAN

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RIPE AND UNRIPE: CONCEPTS OF HEALTH AND SICKNESS IN AYURVEDIC MEDICINE

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Abstract—This paper deals with the concepts of 'ripe' and 'unripe' in Ayurvedic medicine. These concepts express the notions of health and sickness; and I examine the ways in which they were interpreted and applied by Ayurvedic practitioners in S. Gujarat. The concepts of 'ripe' and 'unripe' describe the state of the food-juice, though they also apply to the relative maturity of the stools and the condition of the tongue. I show how these concepts are derived from the classical sources, particularly the *Caraka Samhitā*, though I suggest that the emphasis they receive today may in part be due to later Ayurvedic texts. The present practice of Āyurveda has also been influenced by the impact of cosmopolitan medicine, and I consider how the interpretation of the Ayurvedic theories has been affected by Western anatomy and physiology, particularly in the account of digestion, and the role of 'unripe' food-juice in causing disease.

On the basis of first-hand experience in an Ayurvedic hospital I describe some of the different approaches that were used to rid the body of 'unripe' food-juice, depending on the severity of the symptoms. I illustrate this part of the paper with a schematic account of the treatment of 'heart disease'. I thereby hope to demonstrate how the conceptual physiology of Āyurveda has been combined with Western anatomy. I also show how the properties of some plant drugs (as described in the Ayurvedic sources) were interpreted, and I examine some of the contexts in which these drugs were used. Among the Vaidyas I knew the concepts of 'ripe' and 'unripe' were interpreted in terms of the vernacular classification of 'perfect' and 'imperfect' foods. I discuss this analogy in some detail, and consider the different levels at which it was applied.

GLOSSARY OF TERMS

Sanskrit	English
<i>agni</i>	fire
<i>acintaya śakti</i>	'unknown power' by which a drug acts (see <i>prabhāva</i>)
<i>anupāna</i>	vehicle
<i>anuloma</i>	the property of a drug to expell flatus, faeces, etc.
<i>anna</i>	food
<i>apakva</i>	unripe, immature
<i>apatarpaṇa</i>	depletion therapy
<i>apāna vāyu</i>	the 'downward wind'
<i>asātmya</i>	unwholesome
<i>āgantū</i>	exogenous
<i>āma</i>	adj. unripe; n. immature food-juice
<i>āmapradoṣa</i>	assimilation disorder
<i>āmayah</i>	disease
<i>āma-vāta</i>	rheumatism, rheumatoid arthritis
<i>āmāh</i>	disease
<i>āmāśāra</i>	dysentery
<i>āmāśaya</i>	stomach
<i>āyu</i>	life; longevity
<i>ālasaka</i>	intestinal torpor
<i>āhitāgni</i>	Brahmin who consecrates the sacred fire
<i>ojas</i>	vital essence
<i>kapha</i>	phlegm
<i>kāmalā</i>	jaundice
<i>kāyacikitsā</i>	treatment of bodily diseases; general medicine, as opposed to surgery
<i>kālācāparyayah</i>	seasonal abnormality
<i>krath</i>	decoction
<i>gandah</i>	smell
<i>grghraṣi</i>	sciatica
<i>grahāṇi</i>	duodenum
<i>caitanya</i>	consciousness
<i>jathara agni</i>	gastric fire

<i>jvara</i>	fever
<i>takra</i>	buttermilk
<i>doṣa</i>	humour
<i>dhātu</i>	body-element
<i>dhāri</i>	support, etc. (an Ayurvedic synonym for Life)
<i>nighaṇṭu</i>	medical glossary
<i>nirāma</i>	state of body when cleansed of unripe food-juice
<i>pakva</i>	ripe
<i>pakvāsaya</i>	colon, etc.
<i>pañcakarma</i>	the 5 purificatory procedures
<i>pācana</i>	digestives
<i>pitta</i>	bile
<i>prativāpa</i>	item added to a decoction (acts as a 'catalyst' etc.)
<i>prajñāparādah</i>	'volitional transgression'
<i>prabhāva</i>	'unknown power' by which a drug acts (see <i>acintaya śakti</i>)
<i>pravāhikā</i>	dysentery
<i>prāna vāyu</i>	vital air, the 'in-breath'
<i>brahma</i>	the universal Soul, the Absolute, the Eternal
<i>bhaya</i>	danger, fear
<i>mandāgni</i>	sluggish gastric fire
<i>mala</i>	waste-product of digestion
<i>mālā</i>	garland
<i>yajña</i>	sacrifice, sacrificial fire
<i>rasa</i>	nutrient-fluid, food-juice; plant-juice; taste
<i>rūpa</i>	sight
<i>roga</i>	disease
<i>lāghana</i>	lightening therapy
<i>raīdya</i>	Ayurvedic practitioner
<i>ramana</i>	emesis
<i>vāta, vāyu</i>	the wind
<i>vātaroga</i>	diseases of the wind
<i>vipāka</i>	'post-digestive' action
<i>visūcikā</i>	cholera, choleric diarrhoea
<i>vīrya</i>	potency, power
<i>vṛddhi</i>	hydrocele
<i>veda</i>	knowledge, science
<i>śabda</i>	speech
<i>śalya</i>	arrow; foreign agency causing pain to body; surgery
<i>saṃhitā</i>	compilation
<i>sandhi-vāta</i>	arthritis
<i>saṃāna vāyu</i>	the 'middle-wind'
<i>sāma</i>	state of body when permeated with unripe food-juice
<i>sparsa</i>	touch
<i>hita</i>	wholesome, beneficial
<i>hrdaya</i>	heart
<i>hrdroga</i>	heart-disease
<i>osāmaṇ</i>	water left over from cooking dal (see <i>dāl-pāṇi</i>)

Gujarati	English
<i>kacca</i>	imperfect
<i>kāca</i>	unripe
<i>khicaḍī</i>	kedgerie
<i>ghī</i>	clarified butter
<i>capāṭi</i>	chapati
<i>chās</i>	buttermilk
<i>dāl</i>	dal i.e. a soup-like preparation made from pulse
<i>dāl-pāṇi</i>	water left over from cooking dal (see <i>osāmaṇ</i>)
<i>pakka</i>	perfect
<i>pakva</i>	ripe
<i>peṭ</i>	stomach
<i>lassī</i>	a sweet, rich form of buttermilk
<i>lādu</i>	sweet balls
<i>śāk</i>	vegetables

LIST OF PLANT NAMES

Latin	Sanskrit	Gujarati	English
<i>Glycyrrhiza glabra</i>	<i>yaṣṭimadhu</i>	<i>jethimadh</i>	Liquorice
<i>Piper nigrum</i>	<i>marica</i>	<i>marī</i>	Black Pepper
<i>Ricinus communis</i>	<i>eruṇḍa</i>	<i>eruṇḍo</i>	Castor oil plant
<i>Sesamum indicum</i>	<i>til</i>	<i>tal</i>	Sesame
<i>Terminalia arjuna</i>	<i>arjuna</i>	<i>arjun</i>	
<i>Terminalia chebula</i>	<i>śivā, haritakī</i>	<i>harade</i>	Chebula myrobalans
	<i>abhayā</i>		
<i>Zingiber officinale</i>	<i>śunṭhī</i>	<i>śunṭh</i>	Ginger

I have followed the plant identifications given by Bāpālāl G. Vaidya [23].

ABBREVIATIONS

C.S.	=	<i>Caraka Saṃhitā</i>
Cik.	=	<i>Cikitsasthāna</i>
O.P.D.	=	Out-Patients' Department
Sūtra	=	<i>Sūtrasthāna</i>
Vim.	=	<i>Vimānasthāna</i>

INTRODUCTION

Ripeness is all.
King Lear v.ii.9

Āyurveda means literally the science of life or longevity in Sanskrit (*āyu* = life, longevity; *veda* = knowledge, science). It deals not only with sickness and its cure, but also with the prevention of illness, in which diet and regimen play an important part. It is the classical system of Indian medicine, whose origins date back over 2000 years, and which has become part of general Indian culture. It is still today widely practised throughout India, though as this paper will show, the classical tradition has been subject to considerable modification. Three main factors are involved here. First, the continuous development of indigenous medical literature which has both transmitted and altered the classical doctrine. Secondly, the transformation within the last hundred years or so of Āyurveda into a profession, with its syllabuses, colleges and medical degrees. Thirdly, the impact or influence of cosmopolitan medicine (known in India as allopathy) on the interpretation of classically Ayurvedic theories.

This paper discusses these factors, especially the latter, with reference to the concepts of sickness and health, as applied by Vaidyas (i.e. Ayurvedic practitioners) in Surat, in S. Gujarat; and is based on field work carried out from May 1977–April 1978. I shall show the basic 'continuity' of the humoral tradition, in spite of the impact of cosmopolitan medicine. My approach is similar to that used by Egnor [1], but is in contrast to the views of Zimmermann, who is concerned with the 'epistemological breaks' and 'discontinuities' in modern Ayurveda [2, 3] and the 'obliteration' of the classical system due to the influence of Western anatomy [4]. My views also differ from those of Filiozat, who has claimed that in practice, Ayurvedic treatment was based primarily on experience, to which the theory was adjusted [5]. I hope to demonstrate that as far as present-day practice is concerned,

this is too simplistic an interpretation; there is a continual interaction between the two. However I do not claim that the conclusions which I draw from my work in Surat can be applied to other parts of India.

Surat is a city of about half a million people on the banks of the River Tapi, approximately 10 km from the coast of the Arabian Sea. I was the guest of Sri Bāpālāl G. Vaidya an outstanding scholar and practitioner of Āyurveda in his eighties. He was a Bania by caste, from a non-medical family from Panchmahal District in Gujarat State (formerly in the Bombay Presidency). He studied with Vaidya Amṛtalāl Prāṇaśankar Paṭṭnī of the traditional Jhaṇḍu Bhaṭṭ family, in the years 1916–17. Later he studied with the botanist Mr Jaykr̥ṣṇa Indraj Thaker, Conservator of the forests of Porbander, Gujarat, from about 1919–20. For many years Sri Bāpālāl G. Vaidya lived in Hansot in Broach District in the Bombay Presidency, where he was a socio-political worker as well as a practising Vaidya. He was much involved in the Independence Movement, and was jailed because of this in 1942. In 1946 he became the first Principal of the H. O. Nazar Āyurveda College in Surat, a post he occupied for some 20 years.

With Sri Bāpālāl G. Vaidya I studied part of the *Caraka Saṃhitā* [6] and something of the materia medica. The *Caraka Saṃhitā* is the most authoritative, and arguably the most ancient of the Ayurvedic classics, and Sri Bāpālāl G. Vaidya was widely recognized among Gujarati Vaidyas as an authority on this text. He had also written a definitive work on the Ayurvedic materia medica, *Nighaṇṭu Ādarsa* [7] a work organized on modern principles of botanical classification, and dealing in exhaustive detail with the properties of the 6–700 plants contained in the entire corpus of Ayurvedic texts. He drew on this work, as well as his own personal experience, when teaching me about the materia medica. I found this the most exciting and intellectually rewarding part of my year in Surat. In addition I spent a lot of time in the Swāmi Ātmānand Saraswati Hospital, Surat, observing treatments and therapies. This Ayurvedic hospital,

which gave free treatment in the main, was attached to the H.O. Nazar Ayurvedic College, where students were trained to be Vaidyas. Both were opened in 1946, and Sri Bāpālāl G. Vaidya, in his years as Principal, was largely responsible for the direction and substance of the Ayurvedic training provided. I also met and talked to many Vaidyas in Surat and other parts of S. Gujarat.

The classical doctrine of Āyurveda is based primarily on the theory of the three humours or *doṣa*s, which are present in all living beings. It is the relative balance or imbalance of these humours that determines health or sickness; and the balance or equipose of the humours is the necessary condition for health. The two main causes of disease are faulty diet and faulty regimen, of which the former is held to be the most important. As the *Caraka Saṃhitā* states:

It is the distinction between the use of wholesome diet and that of unwholesome diet that is responsible for the distinction between health and disease in the body [8].

This quotation, in Sanskrit, was placed in the entrance of the Out-patients' department of the Ayurvedic hospital, where patients collected their prescriptions.

I have translated the three humours, *vāta*, *pitta* and *kapha* as wind, bile and phlegm respectively, as this is the current convention. I am not altogether happy about this, since my teacher rejected these equivalents as highly misleading, and where I felt ambiguity resulted, I have retained the original terms. While not wishing to overload the text unduly with Sanskrit and Gujarati words, on balance it seemed preferable to retain the original terms in most cases, and to explain them in the course of the paper. I felt it would be more difficult to demonstrate the multivocality of the specialized terminology, i.e. the different levels at which it can operate, if the same English equivalents were always used.

The present essay deals with the factors considered by the Vaidyas I knew to be most important in accounting for disease. In particular I will examine the Sanskrit concepts of *āma* (unripe) and *pakva* (ripe). While these categories can be traced to their classical sources, the emphasis and interpretation that they receive in present-day Ayurvedic practice have been greatly influenced by cosmopolitan medicine. In addition the interpretation of the *āma*-*pakva* terminology by the Vaidyas also involves comparison with the vernacular concepts of perfect and imperfect foods (Guj. *pakka* and *kacca*), and I will examine this analogy in some detail.

CONCEPTS OF RIPE AND UNRIPE

One of the most important concepts in Āyurveda, as practised by Vaidyas in S. Gujarat, is that of *āma*, namely 'unripe' or 'immature' food-juice, produced by faulty digestion. The adjective *āma* means raw, uncooked, immature etc., in Sanskrit. According to my teacher, Sri Bāpālāl G. Vaidya, food-juice or *rasa* is equivalent to chyle. If the digestive process occurs correctly, the *rasa* is properly mature or ripe (i.e. *pakva*), and can circulate throughout the body, prior to its conversion into other body elements. If, on the other hand, the digestive process is faulty, then the

rasa is deemed unripe or immature (*apakva*), and is called *āma*.

In the view of Sri Bāpālāl G. Vaidya, the importance of *āma* in causing disease is also illustrated by the term *āmayaḥ*, which is one of the Sanskrit synonyms for disease (as it is in Gujarati). He maintained that *āmayaḥ* was derived from *āma*, indicating that the final products of digestion were not assimilable [9]. From this he concluded that all diseases were due to unripe food-juice. *Āma* was therefore regarded as the real cause of all disease.

It is the imperfect process of digestion, caused mainly by faulty diet and regimen, that results in the production of unripe food-juice, which 'soils' or 'spoils' the stomach. The idea of 'soiling' or 'spoiling' the stomach was expressed by the Sanskrit (and Gujarati) root *duṣ*, whose meanings include: to be bad, spoiled or corrupted, to commit a mistake, etc. According to some Vaidyas, it is from this root that the word *doṣa* or humour is derived, though Monier-Williams suggests that *doṣa* may have meant disease before being applied to the humours [10]. Whatever the linguistic origins, it is evident that in the classical doctrine the humours were not only susceptible to vitiation, they were also the main agents causing vitiation of other bodily systems, leading to the manifestation of disease.

When the Vaidya ascertained whether or not the unripe or immature food-juice had spread throughout the body, the terms used were *sāma*-*nirāma*. *Sāma* (*sa* + *āma*) meant that *āma* had been deposited in the seven body elements and other systems, and this was inferred from certain perceivable symptoms. The opposite condition was that of *nirāma* (*niḥ* + *āma*), when the body was without or free from *āma*, and therefore in a healthy state.

The *sāma* state of the body was indicated by the following series of symptoms: a feeling of heaviness in the body, sleeplessness, sticky stools and saliva, swellings in the body, aches and pains, etc.

Another list of symptoms indicative of the *sāma* condition, given to me by a practising Vaidya was: very badly smelling stools which are sticky (and stick to the W.C. when sluiced with water); whiteness on the tongue; heaviness of the body; the throat not clear of phlegm; heaviness of the eyes and a desire for sleep; pain in the joints; lack of desire for food; natural urges not in the proper condition, e.g. difficulty in urination, excessive sweating; lack of a feeling of lightness in the body, and an absence of proper hunger and thirst. These symptoms indicated that *āma* was being deposited throughout the body. Specific diseases resulted from the vitiation of particular systems in the body by the deposited or circulating *āma*. Conversely a feeling of lightness in the limbs, proper hunger and thirst, and normal motions, were indicative of the *nirāma* condition, and hence health. The basic principle of treatment was therefore to remove *āma*, bringing the body to the *nirāma* state, before the application of medicines for specific diseases.

The production of *āma* is described in the *Caraka Saṃhitā*, *Vimānasthāna*, 2, and this chapter was regarded by Sri Bāpālāl G. Vaidya as authoritative. The chapter, entitled "The Specific Determination of the Measure of Stomach Capacity" deals with some of

the rules for correct measure in eating. The stomach is regarded as being divided into three parts. One third should be used for solid foods; one third for liquids, and the remaining third for the full play of the three humours. By observing these rules, ill-effects due to eating without measure (i.e. deficiency or excess) are avoided. In fact 'stomach capacity' is not strictly speaking a question of volume; I was told that it should be understood primarily in terms of the strength of the 'gastric fire'.

Certain symptoms indicating that food has been eaten in correct measure were described to me by several Vaidyas, such as "there should be no feeling of heaviness in the stomach", "one should have a feeling of ease after eating" or "you should still feel slightly hungry after a meal". This advice was offered in general conversation (the irregularity of my digestive system being one of my main preoccupations), and much of it is to be found in C.S. *Vim*, 2, 6 where over a dozen such symptoms are cited. I do not know, in retrospect, whether all these Vaidyas were aware of the source of their advice.

Vim, 2, 10 was held to be particularly relevant to a consideration of *āma* as the main cause of disease. In this verse *āma* disorders (termed *āmapradoṣa-s*) are divided into two main classes—*visūcikā* and *ālasaka*, and these diseases are described in detail in the rest of the chapter. This division was regarded by the Vaidyas I knew as indicating the severity of disorders that could result from *āma*. Of the two, *visūcikā* was regarded as the more serious disease, and was interpreted as a 'cholera-type' of infection, or 'choleric diarrhoea'.

Ālasaka can be variously translated as 'intestinal torpor' [11] or 'intestinal inertia' [12]. A general sluggishness in the digestion of food was regarded by the Vaidyas in Surat as a concomitant of a sluggish gastric fire, resulting in the production of *āma*. I was told that in such a patient the food stayed too long in the stomach and intestines. But in General Practice, and the O.P.D. of the Ayurveda Hospital, I did not observe the identification of a specific disease syndrome termed *ālasaka*, with the characteristics described in the *Caraka Saṃhitā*.

The practical significance of this chapter was to draw attention to the importance of correct diet and eating habits in relation to the strength of the gastric fire. The description of the factors affecting the digestive process e.g. the quality of food ingested, the frame of mind of the individual etc. were all interpreted as explaining how *āma* is produced when these factors were not correct.

It appeared to me that the interpretation of the chapter by the Vaidyas I knew was to stress *āma* as the main cause of all (or virtually all) diseases, and not only *visūcikā* and *ālasaka*. It is possible that this emphasis on the importance of *āma* is found in later medical texts, though it was regarded as being ultimately derived from the *Caraka Saṃhitā*. The majority of Vaidyas in S. Gujarat did not study the *Caraka Saṃhitā*, and among the texts most usually employed were the *Bhāvaprakāśa*, a compilation dated to the first half of the sixteenth century [13] and the *Mādhavanidāna*, a systematic presentation of diseases and their etiology, dated at about 700 A.D. [14]. I have not studied either of these works, though Dwarkanath, in his

Introduction to kāyachikitsā [15] has reviewed the descriptions of *āma* given in the *Mādhavanidāna* and other texts, including the *Caraka Saṃhitā*. He concludes that the emphasis on *āma* as the main cause of disease is given in a commentary on the *Mādhavanidāna*, where a number of definitions and descriptions of *āma* are cited. Some of these views correspond closely to the account of *āma* that I was given in Surat. Dwarkanath's book was not widely read among the Vaidyas I knew; though several copies were to be found in the library of the Ayurvedic College.

As we have seen, in the classical doctrine of Ayurveda unwholesome diet is regarded as the main cause of disease. The provocation of the humours by undigested food can give rise to a wide range of disorders [16]. The production of *āma* is only one part of this process. Furthermore wholesome diet in itself is not enough to obviate the possibility of disease. Other factors are also cited as causing disease, and these are: seasonal abnormality (*kālaviparyayaḥ*), 'volitional transgression' (*prajñāparādhaḥ*), and the non-homologous contact of sound, touch, sight, taste and smell (*asātmyāḥ śabda-sparśa-rūpa-rasa-gandāḥ*) [17]. These are the exogenous (*āgantū*) causes of disease. A further exogenous factor is *śalya* (lit: an arrow), which refers to any outside agency causing pain or wounding the body. In Ayurveda *śalya* also means surgery, particularly that part devoted to the extraction of arrow heads, splinters, etc. These classical concepts have been given a broader interpretation in modern Ayurveda. For example, classically, *śalya* can also apply to any foreign element within the body causing severe pain and disease. Bāpālāji extended this latter sense of *śalya* to include extreme constipation or the accumulation of phlegm (*kapha*) within the body (resulting in swellings). He stated that *āma* was also regarded as a kind of *śalya*, in that it caused disease and could lead to considerable pain; and like an arrow it had to be removed before health could be restored.

We have already noted that the state of the stools and the condition of the tongue are related to the concepts of *āma* and *pakva*, and are important in determining the health or sickness of the patient. We now deal with these features in somewhat greater detail.

The condition of the stools and the frequency of evacuation were one of the indications of the state of the patient's health. 'Unripe' stools were both a product of the incomplete digestive process, and also contained the substance *āma*. The 'unripe' of imperfect stool was heavy and sticky, remaining at the bottom of the W.C. after sluicing with water. It also possessed a very bad smell. All these factors indicated the presence of *āma* and hence imperfect or incomplete digestion. By contrast the normal or 'ripe' stool was perfectly formed, relatively odourless, and able to float. These symptoms indicated that digestion had proceeded correctly, and that the stools were free of undigested or partially digested matter. Meulenbeld makes the following comment about the condition of the stools as described in Chapter 3 of the *Mādhavanidāna*:

The statement that floating stools are characteristic of maturity (3, 12–13) i.e.: of a completed digestive process, is

remarkable, because stools of this kind are seen in all disorders associated with steatorrhoea [18].

In the Ayurvedic hospital, no tests were performed on patients' stools as far as I could tell. Blood and urine samples were sometimes tested in the small laboratory attached to the hospital which had been donated for this purpose by local businessmen from the Rotary Club. The laboratory was equipped to make basic allopathic tests, e.g. blood counts etc. and was most frequently used by the allopathic section attached to the Āyurveda hospital. This was run by an allopathic doctor, who had done post-graduate training in England, and was a qualified surgeon. This section, occupying the ground-floor of the three-storey hospital building, contained the gynaecological ward and an operating theatre.

In the Ayurvedic section, though, patients would most usually be asked about the condition of their stools and the frequency of evacuation, as well as any difficulties they might experience in urination. A stinging sensation during urination was regarded as a symptom of 'hyperacidity', and this was related back to a basic faultiness in the digestive process (perhaps in this instance caused by too many chillies in the diet, etc.). These symptoms were regarded as significant by Vaidyas in private practice as well.

The tongue also provided an important means of determining the patient's health, and it was regarded as the mirror of the stomach. If the tongue was coated with excess mucus (equated here with *kapha* or phlegm) then *āma* was being produced in the stomach, and digestion was faulty. Such a view was consistent with the account of digestion given by Caraka (see below) where the phlegm is produced as a by-product or waste of the first stage of digestion in the *āmāśaya*, which was usually translated as 'stomach'.

Another Vaidya expressed a similar view about the nature of *āma*. While it is a product of faulty digestion, he said, it was not considered a *pitta* or bile disorder (equated here with the 'gastric fire'), but a phlegm one, that is to say, it was considered a 'mucus type' disorder. The whiteness of the tongue, described as 'mucus', was equated with phlegm, but the connection with *āma* was not altogether clear, unless the term was being used more figuratively than usual to indicate faulty digestion. Was the mucus on the tongue equated with phlegm itself (in a 'gross' form); or merely regarded as an indication that excess phlegm was present in the stomach as a by-product of faulty digestion, of which *āma* was the most significant result? I did not obtain a clear answer, and I think this was partly due to the way in which the allopathic and Ayurvedic terminologies were combined. The Gujarati substantive *āma* can also be translated as 'mucus'. However, the whiteness of the tongue, the notion of 'mucus' and its relation to the state of the stomach, are essentially allopathic notions. In addition the structure of the stomach according to allopathy was incorporated into the Ayurvedic teaching, along with some knowledge of the significance of other internal organs in digestion (e.g. the liver). The resultant equation or identification of the stomach with the Sanskrit term *āmāśaya* can be seen to have two effects. Firstly, *āmāśaya* can be used as the closest Sanskrit equivalent for 'stomach'. But more signifi-

cantly, the functional notion of the *āmāśaya*, and the processes associated with it in the conceptual physiology, were 'grafted onto', or at least partially attributed to, the stomach, whose physical structure is described in allopathy. Hence the tongue was both a mirror of the stomach (is mucus present or absent?), and an indicator of the production of *āma* in the *āmāśaya*. The identification was taken one step further, when the whiteness of the tongue was also attributed to excess *kapha* being produced in the *āmāśaya*.

It will be apparent that the terms for the main organs of digestion, namely the *āmāśaya* and *pakvāśaya*, were derived from the *āma-pakva* categories. The *āmāśaya* (lit: the place or receptacle for undigested food) was usually identified with the stomach. The *pakvāśaya*, variously identified as the small intestine, large intestine, etc. was the place where the 'ripening' of the partially digested food occurred. Furthermore, though the term *āmāśaya* was identified with stomach (or some part of it) in Western physiology, in the clinical practice of Āyurveda it was applied by Sri Bāpālā G. Vaidya to the abdominal area as a whole [19]. Its significance was thus to reinforce the importance of *āma* as a causative factor in disease; and this principle was of more practical importance than the detailed accounts of digestion found in the classical texts.

However, the frame of reference remained largely traditional, and informed the approach of the Vaidyas I knew, in spite of the impact of allopathic knowledge. Accordingly, the description of digestion given in the *Caraka Saṃhitā* [20] was regarded by them as the most authoritative account.

The *Caraka Saṃhitā* distinguishes three main stages in the process of digestion:

1. Food is ingested by the *prāṇa vāyu* (vital air; the 'in-breath'), becomes sweet, and results in the formation of phlegm (*kapha*). In the *āmāśaya* the food is broken down, softened, and digested by the gastric fire, which is situated below the *āmāśaya*, and stimulated by the *samāna vāyu* (the 'middle-wind'). The digested food is converted into food-juice and excretory matter (*mala*).

2. At the next stage of digestion, as the food-juice leaves the *āmāśaya*, it becomes acid, and excites the secretion of bile (*pitta*).

3. When the digested food reaches the *pakvāśaya* it is dehydrated by the body-heat, and converted into fecal lumps. This process is accompanied by an increase of wind (*vāta*).

Various identifications between the Sanskrit terminology and allopathic physiology were given to me by several Vaidyas. For example, the secretion of *pitta* that occurs after the acid stage of digestion was equated with the secretion of bile into the small intestine. The location of the 'gastric fire' (*jāṭhara agni*) was described as: below the stomach; or, in the duodenum just after the pyloric sphincter; or else the term was equated with all the digestive juices and enzymes known to Western medicine. Since the term *pakvāśaya* implies a process of ripening or maturation (as well as being the receptacle for digested food), it was extended to include both small and large intestines, since in the latter fecal matter is produced as the end product of digestion. According to some Vaidyas,

though, the organ known as the *grahāṇī* was identified with the duodenum. However, the identification of where the *āmāśaya* ended and the *pakvāśaya* began could not be established unequivocally, since there is no clear match between Ayurvedic functions and allopathic structures.

The difficulty in making such identifications arises because the conceptual physiology of Āyurveda is predominantly functional in approach. By contrast, allopathic anatomy and physiology describe the systems and the organs of the body primarily in structural terms. Not only does this make identifications between the two systems difficult, but the structural detail of allopathy remains largely irrelevant to the basic Ayurvedic categories used to define the processes of the body, and the related notions of health and disease. In this context Sri Bāpālā G. Vaidya's attitude was instructive. On the one hand he was insistent that the specialized terminology of Āyurveda could not be adequately translated into English equivalents. On the other hand he was an advocate of modern knowledge, and possessed a first-class library of both allopathic and Ayurvedic books. As Principal of the Āyurveda College he had championed the 'combined' course, which included allopathy. These 'combined' courses were widely taught in Ayurveda Colleges until the mid-60's, when they were stopped, so I was told, mainly for political reasons and not because of the conceptual difficulties of combining the two systems. Sri Bāpālā G. Vaidya was prepared to accept a rather 'loose' equivalence between the two systems, as far as I could tell, and would use whatever was of value from either system depending on the circumstances, though remaining rooted in Āyurveda. Thus while he was fully conversant with the allopathic account of digestion, for example, he was also prepared to apply the term *āmāśaya* in a broad sense in the clinical situation. It is also possible that such a usage parallels the colloquial Gujarati term for stomach, *peṭ* (from Sansk. *peṭa* = basket), which includes the whole abdominal area as well.

In general allopathic knowledge was interpreted so as to harmonise with the basic Ayurvedic categories.

In other words, the underlying assumptions of Āyurveda persisted, even where the terminology of allopathy was invoked. One problem that arises from this combination of systems is that of medication, particularly when traditional remedies are prescribed for ailments that have only recently been described in allopathy, and have no apparent parallel in the classical texts. The approach adopted in such cases depends very largely on the skill and knowledge of the practitioner involved.

It is apparent that the *āma-pakva* categories touch on many aspects of the contemporary practice of Āyurveda. In general practice, the expression "it is an *āma* disorder" invoked a set or series of associations. These would include a consideration of such symptoms as the state of the whole body, and the relative maturity or immaturity of the stools. But most important of all, attention would be focused on the state of the gastric fire and the suitability of the patient's diet and regimen.

One vaidya said to me "If the gastric fire and motions are alright, then everything else is alright". The weak or sluggish condition of the gastric fire was known as *mandāgni* (Sansk. *manda* = sluggish, *agni* = fire), and this condition was exacerbated by the production of *āma*, setting up a feed-back between the two. The 'fire' referred to here was the *jāṭhara agni*, the main agent of digestion. As stated above, I was told that it could be equated with all the enzymes or digestive juices known to modern medicine. On the other hand, the sluggishness of the *jāṭhara agni* was also held to affect the power of the other 12 *agni-s* or fires, which are regarded in the classical doctrine as being responsible for the complete digestion and assimilation of food. The Sanskrit quotation often cited in this context was

sarve rogāḥ api mande > gnau

i.e. all diseases (originate) in the sluggish gastric fire. I have not been able to trace the source of this quotation, but it indicates the emphasis employed in diagnosis, and the priorities of treatment that follow

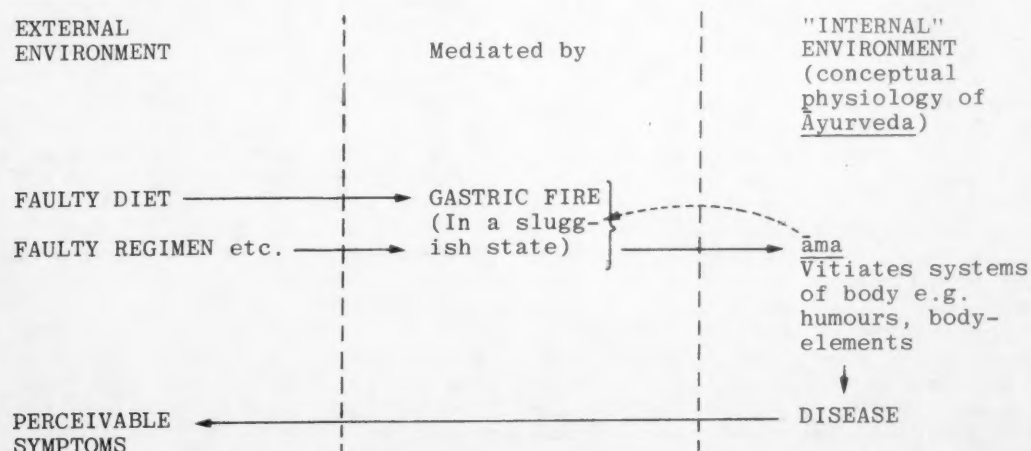


Fig. 1. The importance of the gastric fire in Ayurvedic diagnosis.

from this. We can describe the diagnostic approach in Fig. 1.

While *āma* was held to be the main pathological factor responsible for disease, it did not follow that all patients who were in some sense ill were in the *sāma* condition, i.e. *āma* had been deposited through the body as a whole. The importance of *āma* in the clinical situation can be identified at two main levels, though too sharp a distinction should not be drawn between them. At the first level, improper diet and/or faulty regimen 'soils' or 'spoils' the gastric fire, resulting in the production of *āma*; and the irregularity of the motions also indicates that the gastric fire is not functioning properly. In the clinical situation a detailed account of how the *āma* produced a wide range of different disease conditions was rarely given; nor from the practical point of view was it really necessary. Diagnosis generally proceeded by identification of the most important symptoms so that the complaint could be fitted into general Ayurvedic categories. Usually this meant diagnosis of the disease as being due to the vitiation of the humours, i.e. whether the disease was a wind, bile or phlegm type of disorder, or a combination of these three. From this classification certain therapies or types of medication would be prescribed, following from the inherent rationality of the system (especially the action of the tastes on the humours) [21] as well as the application of remedies on an empirical basis.

At the second 'level', where the sluggishness of the 'gastric fire' and the production of *āma* had persisted over a period of time, the circulation of *āma* through the body gave rise to the *sāma* condition, in which the whole body was affected.

This contrast between the two 'levels' may seem simplistic, particularly as all diseases were traced back to faulty digestion and the production of *āma*. The need to make some such distinction becomes apparent when we consider the disease typologies used by different Vaidyas. I was particularly interested in the different 'wind' disorders (*vātaroga*) diagnosed at the Ayurvedic Hospital. In this category the most frequent were those that could be broadly classified as 'rheumatic'. However, the Ayurvedic typologies and Western identifications employed varied from practitioner to practitioner. A detailed discussion of these typologies will be presented elsewhere, but of relevance here is the distinction made between *sandhi-vāta* and *āma-vāta* by the young Vaidya in charge of the *pañcakarma* department (at the Ayurveda hospital). The former was translated by him as arthritis, and the latter as rheumatoid arthritis, or sometimes as 'rheumatism with a temperature'. *Sandhi-vāta* (Sansk. *sandhi* = joint; *vāta* = wind) was identified by the presence of pain, etc. in the smaller joints and was regarded by this Vaidya as a 'pure' *vāta* disorder. In this case then, the symptoms were due to the vitiation or morbidity of wind alone at the affected joints; though ultimately this could be traced back to the sluggishness of the 'gastric fire'.

At a more serious or advanced stage of illness the *āma* produced by the combination of faulty diet and regimen and the sluggishness of the gastric fire, would circulate throughout the body. The deposition of *āma* at the joints, in conjunction with morbid wind (or perhaps causing morbidity of the wind) gave rise to

the condition called *āma-vāta*. The most significant diagnostic features of this condition were pain and restriction of movement in the larger joints, accompanied by a temperature. The relationship of morbid wind and *āma* in this condition was never clearly explained; the significant diagnostic step appeared to be that from a consideration of certain symptoms (pain in large joints, temperature etc.), the diagnosis *āma-vāta* was reached. The contrast is useful because it illustrates that while all diseases may ultimately be traced back to the sluggishness of the gastric fire and the production of *āma*, it did not follow that all patients were regarded as being in the *sāma* state. Furthermore, the detailed physiological mechanism whereby different diseases occurred was not always given. In this respect we can say, in the most general terms, that there were two main levels at which *āma* caused disease.

However, it was not always apparent to me in the hospital that patients diagnosed as suffering from *āma-vāta* were in fact in the '*sāma*' state, i.e. possessed the other symptoms indicative of the *sāma* condition of the body. In fact the crucial differentiating symptom between *sandhi-vāta* and *āma-vāta* was the presence or absence of temperature in conjunction with pain and restriction of movement in the joints. From this diagnosis the conceptual pathology followed, which in turn dictated the appropriate lines of treatment. The aches and pains identified here with *sandhi-vāta*, particularly if persisting over a long period of time, would have been identified by many Vaidyas as an '*āma*-disorder', i.e. due to the persistent accumulation of *āma* in the body. There is a blurring between the two different 'levels' at which *āma* causes disease, and perhaps one should not look for too clear-cut a distinction. Sri Bāpālāl G. Vaidya used a somewhat different classification; the term *āma-vāta* covered the general class of 'rheumatic disorders' or 'rheumatic type' of disorder; of which the more severe form was 'rheumatism with a temperature'. Here then the disorders distinguished as either *sandhi-vāta* or *āma-vāta* (above), were both regarded as *āma* disorders; and different lines of treatment followed from these different classifications. In Gujarati the term *sandhi-vāt* usually describes both rheumatic and arthritic conditions. I have not been able to find a description of a disease syndrome called *sandhi-vāta* in the classical Ayurvedic sources; so perhaps in this instance there was an overlap of Sanskrit and vernacular categories.

Another means of distinguishing between the different levels at which *āma* causes disease is in terms of 'chronic' and 'acute' conditions. One Vaidya said to me that all chronic disorders were due to *āma* in the body. While not defining what he meant by 'chronic', (though using the English term), the examples of chronic disorders he gave me included: backache, lumbago, sleeplessness, and related conditions with a history of up to 20 years. He claimed that 'miracle cures' in these cases had been obtained merely by changing the diet and hence removing the main cause responsible for the production of *āma*. Though acute illnesses such as cholera and typhoid were not directly caused by *āma*, nonetheless the predisposition of the body to these infections was held to be caused by *āma* also.

This contrast between the 'acute' and 'chronic' con-

ditions defined partly in terms of Western medical categories, also defines the different levels at which *āma* is seen to be responsible for disease, and provides another example of 'medical pluralism', whereby the conceptual pathology of Āyurveda was interpreted so as to harmonize with, or accommodate allopathic notions of disease. Another example of such pluralism was provided by a Vaidya I met in Bombay, who characterized the notion of *āma* as being equivalent to 'food toxæmia'. This latter term had become quite fashionable in certain circles in America [22], but the equation between the two terms ignored completely the different physiologies and pathologies which generated them.

THE TREATMENT OF *ĀMA*

For the Vaidyas I knew, the *sāma* condition of the body had to be alleviated before medication. *Āma* had to be removed, and the weakened 'gastric fire' reactivated, otherwise medication would not be effective. The first line of treatment in curable ailments resulting from *āma* was depletion therapy (*apatarpana*). This therapy was of three kinds, depending on the strength of the morbid factor, i.e. the severity of the disorder. In practice *apatarpana* was usually equated with *laighana*, and this was interpreted as 'lightening' therapy, meaning that therapy which promoted lightness of the body through reduced or starvation diet. The extent to which the diet was curtailed varied from case to case, but the principle behind the therapy was that reduced diet would result in an increase of *vāta* (wind), with a corresponding increase of the digestive fire, so that morbid or provoked humours would be digested or dried up. But this would only be successful where morbidity was relatively slight. 'Lightening therapy' could mean complete starvation, though more usually it consisted of a very light diet, exercise (where possible) and drinking warm water, all of which were considered useful in aiding the digestion of *āma*. When my appetite was reduced as an after-effect of malaria, one Vaidya told me to miss the evening meal occasionally, as this would increase my hunger and help the digestion of *āma* in the body.

Though *laighana* alone was equated with fasting in the mildest class of disorders (i.e. those not requiring hospitalization, or even medication), it could also be applied to patients in the hospital. In these circumstances it was regarded as a severe form of treatment since the patients were often weak. It involved a total fast for 2-3 days during which the patient was only allowed to drink warm water. The result of this regimen was that *āma* would be totally digested by the body. Then digestives, such as the powder of the dried rhizome of ginger (*Zingiber officinale*; Sansk. *śunṭhi*; Guj. *śunṭh*) [23] were administered to stimulate the digestive fire, along with a light diet, so that any residual 'toxic matter' was neutralized. After a further 1-2 weeks, when the body was totally free of *āma*, specific drugs would be administered for the disorder. It was at the Vaidya's discretion to decide whether the patient could withstand a total fast at the beginning of this regimen. In reality, patients admitted to the hospital, particularly with the *āma-vāta* syndrome of

disorders, and a weak digestive fire as a concomitant symptom, were usually put on a light diet with digestives from the beginning of hospitalization.

This therapy, termed *laighanapācana* in the *Caraka Samhitā*, combined 'lightening' therapy (i.e. restricted diet) and the prescription of *pācana*. *Pācana* are the medicines which digest immature or undigested matter (i.e. *āma*), without increasing the appetite. According to the *Caraka Samhitā*, *laighanapācana* should be applied where the humours are more provoked or of 'medium strength', compared to the cases where *laighana* alone is applied [24]. However, I was not able to see how the relative severity of cases in the hospital was assessed. Where food remained as an undigested mass in the stomach, or when a great deal of phlegm had accumulated, emesis (*vamana*) was applied—though this was not often used [25].

The form of a 'light diet' varied from Vaidya to Vaidya, and also depended on the patient involved. However, the underlying principle of a 'light diet' was that it should stimulate the gastric fire and nourish the individual, but not increase *āma* in the body. A light diet would include cooked rice, *dāl*, and *khicaḍī*. In Gujarat *dāl* is a soup-like preparation, often highly spiced, made from pulses and eaten with cooked rice. *Khicaḍī* (kedgerie) is a mixture of pulse and rice cooked together [26]. The water left over from the cooking of *dāl*, to which some spices, mainly pepper (*Piper nigrum*, Sansk. *marica*, Guj. *marī*) were added, was considered a good stimulant of the digestive fire. This 'soup' taken with a meal, was called *osāman* or *dāl-pāṇī* in Gujarati, and I was prescribed it after fever. It did stimulate the appetite, though it had little nutritive value, taken in itself. It was prepared in the home, as a by-product of normal cookings. Fruits such as grapes, oranges etc. were allowed, but bananas or apples (considered 'heavy' in digestion) were forbidden. Likewise wheat, held to be the best promotor of *kapha* (phlegm) was forbidden, so *capāṭī*-s and other such articles, could not be eaten. Other items, considered heavy or difficult to digest, such as green leafy vegetables (or nuts) were likewise forbidden. Where a vegetarian diet was observed, as in the Brahmin family I ate with, the main meal of the day was eaten between 10 and 11 a.m. and consisted basically of one or more vegetable dishes (Guj. *śāk*) eaten with *capāṭī*-s; followed by cooked rice and *dāl*. Where an Ayurvedic regimen was being followed, this diet would be markedly curtailed; at one stage I was eating only cooked rice and *dāl*, or *khicaḍī*. One Vaidya I knew also forbade his patients all milk products (i.e. curds, etc.) except tea twice a day, in the initial stages of treatment, as milk was deemed heavy in digestion, and promotive of phlegm. However, small amounts of buttermilk (Sansk. *takra*; Guj. *chās*) were considered to stimulate the gastric fire also, if prepared with salt. The sweeter variety, made with more curds and heavier in digestion (Guj. *lassī*) was counter-indicated. Meat-eaters were allowed some meat. Depending on the particular case, the diet would be altered, but the above illustrates some of the principles involved.

These dietary rules were prescribed for patients treated in General Practice or the O.P.D. of the Ayurvedic Hospital. While their disorders were ultimately attributed to *āma*, they were not severe enough to

merit hospitalization and the extreme forms of 'lightening therapy'.

In general then, 'lightening therapy' consisted of light diet and digestives or other preparations deemed effective in ridding the body of *āma*. This approach corresponds to the *laṅghanapācana* type of therapy.

One remedy for the digestion of *āma* used by several Vaidyas I knew was as follows:

One teaspoon of ginger powder was boiled in 200 ml of water, and reduced to one quarter of the volume. This was the same principle employed in making all decoctions (*kvath-s*), where the liquid to which the drug had been added, was reduced to a quarter of its original volume. One teaspoon of castor oil (from the plant of *Ricinus communis*; Sansk. *eruṇḍa*; Guj. *eruṇḍo*) and one teaspoon of sugar were added. This is a technical item called (Sansk.) *pratīvāpa* though I did not hear this term being used. A decoction is always taken with a *pratīvāpa* ('catalyst'). The mixture was drunk early in the morning on an empty stomach and could also be taken in the evenings.

The dried ginger was considered effective in stimulating the gastric fire and helping the body digest *āma*. The prescription of castor oil was justified in more specific terms, drawing in some detail on the conceptual physiology of Ayurveda. *Āma* and phlegm (*kapha*) were considered to be most prominent in the body early in the morning. The *Caraka Saṃhitā* in fact states that phlegm (*kapha*) is observed to be most prominent in the early morning and the digestive power of the body is correspondingly reduced. Castor oil given early in the morning will not therefore be digested, and will have a laxative effect. This was deemed beneficial, and increased regularity of the motions would enhance the normality and power of the digestive fire. The regulation of the motions, and urination were controlled by the *apāna vāyu* (the 'downward wind'), one of the 5 'winds' in the body. If its functioning could be corrected or improved, it would help the functioning of the other 4 'winds', of which the *samāna vāyu* (the 'middle wind') was responsible for the strength of the digestive fire (see above). The *Caraka Saṃhitā* states that bile (*pitta*), closely connected with the 13 *agni-s* or fires in the body, is observed to be most prominent in the middle of the day. The appetite correspondingly increases, and as a result the oil will be digested; the assumption being that though the oil had a laxative effect in the early morning, it did not all pass through the body, and some was still present. The digested oil was considered to have a *samana* effect, that is to say it would be a 'stabilizer' (the English term used); and would restore equilibrium to deranged or provoked humours [27]. Due to its 'hot' property, castor oil would pacify provoked wind in particular (which was 'cold'). As a result castor oil given with digestives was considered most suitable in treating *āma-vāta* disorders, namely that class of disorders due to *āma* and morbid wind, and variously translated as 'rheumatic-type' and/or arthritic disorders. The castor oil mixture was prescribed for patients treated in General Practice; and for those that were hospitalized as well.

One Vaidya I heard of, living in the nearby town of Navsari, was afflicted with such severe arthritis that he could hardly walk. He took this digestive prep-

aration to rid his system of *āma*, along with a light diet. Once the most pronounced symptoms of *āma* had been removed, he took a well-known mercury preparation, *mahāvāta vidhvamsana rasa*, twice a day, and (so I was told) was soon cured. I mention these details to indicate the underlying principles of treatment involved.

The castor oil prescription described above was also considered effective in dysentery. Among the Vaidyas I knew, dysentery was identified with *āmātisāra*, i.e. an *āma* type of diarrhoea. This identification is not universally accepted; according to Meulenbeld "The disease called *pravāhikā* is usually identified as dysentery..." [28]. *Pravāhikā* was known to these Vaidyas, and was also subsumed under the general category of a 'dysentery type' of disorder. I do not know how the two were distinguished in practice. The usual identification of dysentery as an *āma* form of diarrhoea explains—at the level of the conceptual physiology—why the castor oil mixture was considered suitable in this disorder as well.

Some Vaidyas said castor oil should be given in cases of dysentery with the powder of the dried fruits of *Terminalia chebula* (Sansk. *śivā*, *haritakī* Guj. *harade*), oil of *Sesamum indicum* (Sansk. *til*; Guj. *tal*) and clarified butter (*ghī*). *Terminalia chebula* was considered one of the best digestives of *āma* (see below) and clarified butter was a 'vehicle' (*anupāna*) used for its 'cooling' properties, particularly where bile was provoked.

Many other combinations were held to be effective in digesting *āma*, comprising either single drugs taken alone or combined with castor oil, as above; or with other substances as 'vehicles'. The choice of drug depended on which system of the body was considered to be most effected by the *sāma* condition of the body as a whole, e.g. heart, liver, etc. In addition to the powder of the dried ginger, *Picrorhiza kurrooa* (Sansk. *kaṭukā*; Guj. *kaḍu*) and *Terminalia chebula* were widely used digestives. *Picrorhiza kurrooa*, an intensely bitter drug with many uses, was sometimes prescribed when the *sāma* state of the body was associated with a heart condition. The diagnosis of a heart condition, usually, though not always, originated from an allopathic doctor. The allopathic category of diagnosis was often retained, along with whatever additional Ayurvedic diagnosis might be made.

Some of the initial symptoms of a heart condition were described to me as congestion, breathlessness, biliousness, lack of appetite and constipation. These essentially allopathic symptoms [29] were attributed to the *apāna vāyu* (the 'downward wind') going up instead of down. As stated above, *apāna vāyu* is specifically responsible for the correct evacuation of the bowels, urination, the secretion of semen (and the correct flow of the menses). Its action is therefore downwards. If, due to a long-standing accumulation of *āma* in the body, its direction is reversed, the first signs of a heart condition, particularly congestion, can result. *Picrorhiza kurrooa* is therefore considered useful, because its bitter properties stimulate the liver and help the digestion of *āma*; and also because of its *anuloma* properties. *Anuloma* literally means 'with the hair' (implying with the grain), i.e. in natural order, and hence favourable. Its Ayurvedic usage describes the property of a drug to regulate or correct the flow

of *apāna vāyu* in the downwards direction, and hence the correct elimination of faeces, urine etc. As a result the immediate cause of congestion will be removed.

In general, in Āyurveda, substances of bitter taste are regarded as reducers of strength [30]. *Picrorhiza kurroo*, while intensely bitter, is held to have the reverse effect. Its effectiveness in stimulating the liver not only makes it a good digestive of *āma*, but recommends it in the treatment of jaundice. According to Sri Bāpālāl G. Vaidya it has the additional property of turning the blood alkaline. I do not know the source of this information although it is most likely to be based on some research that he had read about, and it was mentioned as relevant in the general context of 'heart conditions'.

This example shows the different levels at which 'medical pluralism' operates, not only in terms of the Ayurvedic and allopathic physiologies, but also the properties by which the efficacy of a drug is described. The properties and uses of the drug are not only derived from traditional sources, the *saṃhitā*-s (compilations) and *nighaṇṭu*-s (medical glossaries) but also from personal experience and oral tradition (e.g. 'my guru always prescribed drug X in form B for condition Y'). Allopathic knowledge, at whatever level, has become an additional source of information.

These different 'levels' of knowledge become relevant when we examine the general category of 'heart disorders' as used by practising Vaidyas (Fig. 2). In the *Caraka Saṃhitā* the class of 'heart disorders' (*hrdayoga*) is described twice [31].

Furthermore the provocation of *apāna vāyu* is described in the text as causing a wide range of serious disorders [32]. This is similar to the cause of 'heart disease' given to me in Surat.

However, the structure and function of the heart (Sansk. *hrdaya*) in Āyurveda [33] is different from that found in allopathic medicine. It is, for example, regarded as the seat of the 'vital essence' (*ojas*) and consciousness (*caitanya*) [34], though these technical terms are not easy to define. It is also described as the support of life (*dhārī*) [35], but its function is not clearly identified with that of the circulation of the blood, and the account of its structure cannot be recognised in allopathy. Among the practitioners in Surat, though, the allopathic description of the structure and function of the heart was accepted as correct, though in other contexts some of the Ayurvedic functions would be retained (e.g. the heart as the repository of 'vital essence'). The category of 'heart disease', as used by these Vaidyas, was therefore somewhat ambiguous; but this very ambiguity allowed the assimilation of modern anatomy and physiology to the more general categories of Āyurveda. The problems involved in making equivalences or identifications between the two realms of discourse (Āyurveda, Allopathy) are considerable; but in the clinical situation these identifications were made or assumed as necessity dictated. The diagnosis of a 'heart condition', if originating from an allopathic doctor, could therefore be accepted and treated on lines largely dictated by the conceptual physiology of Āyurveda. Again, oedema of the ankles and legs, regarded in Western medicine as indicative of right heart failure, was assimilated to the category of 'heart disease' and was

treated on Ayurvedic lines, even though this symptom is not so described in the classical texts.

Linguistically the equation *hrdaya* = 'heart' ignores the multivocality of the Sanskrit term and its derivatives. When the properties of a drug are described in the *saṃhitā*-s and the *nighaṇṭu*-s in verse form, chains or 'garlands' (*mālā*-s) of such properties are given. Where one property, among a lot of others, was *hrdayam*, it was translated by Sri Bāpālāl G. Vaidya as 'cordial', in that context meaning that the drug (along with its other properties), promoted the well-being of the whole system. To equate or simply translate the term as 'good for the heart' ignores not only the conceptual physiology involved, but also the linguistic level at which it functions as one of a string of such terms. Among younger Vaidyas, products of the modern medical colleges, the equation *hrdayam* = 'good for the heart' was sometimes made. One could argue that a drug that is good for the whole system will be good for the 'heart' as well; but the linguistic shift indicates how the traditional corpus of knowledge, with all its inter-relations, is altered by the impact of Western anatomy and physiology.

Another example of 'medical pluralism' as the conceptual level was afforded by a patient admitted to the Ayurvedic Hospital with 'Hiatus Hernia'. The patient, a man in his fifties, had received the diagnosis from an allopathic doctor. In the Āyurveda Hospital this diagnosis was accepted, but it was treated on the assumption that it was also caused, in the first instance, by the upward movement of the *apāna vāyu*. Treatment was therefore directed towards correcting the movement of the *apāna vāyu* in the downwards direction and reactivating the digestive fire. This case was supervised by one of the senior Vaidyas attached to the Ayurvedic Hospital, and there were certain differences in approach from that advocated by Sri Bāpālāl G. Vaidya in alleviating congestion in heart conditions. (Details of this case will form the subject of a later publication.)

The use of *Picrorhiza kurroo* in this context also illustrates how some properties of a drug will be emphasized or regarded as significant in one context, but not in another. The bitter properties of *Picrorhiza kurroo* recommended it in stimulating the liver; so it was used as a digestive of *āma*, and also in jaundice (identified with the Sansk. disease *kāmalā*). Its *anuloma* properties have been discussed above. But it was also highly regarded as a 'cooling' drug, and therefore prescribed where bile (*pitta*) was morbid or provoked. In the treatment of heart disease associated with morbid bile the *Caraka Saṃhitā* recommends the paste of the root of *Glycyrrhiza glabra* (Sansk. *yaṣṭi-madhu*, Guj. *jethimadh*), *Picrorhiza kurroo* and sugar water, taken together [36]. In this case, each of these ingredients is included primarily because of its 'cooling' properties but *Picrorhiza kurroo* is not specifically recommended here for its *anuloma* properties. In General Practice though, the 'cooling' properties of *Picrorhiza kurroo* were regarded as most valuable in fevers associated specifically with bile (*pitta jvara*). According to Bāpālālji [37] this emphasis in the use of the drug is found in the *Sodhalaṇighaṇṭu* [38] a 14th century text, though I have been unable to trace this reference. I mention these details to indicate

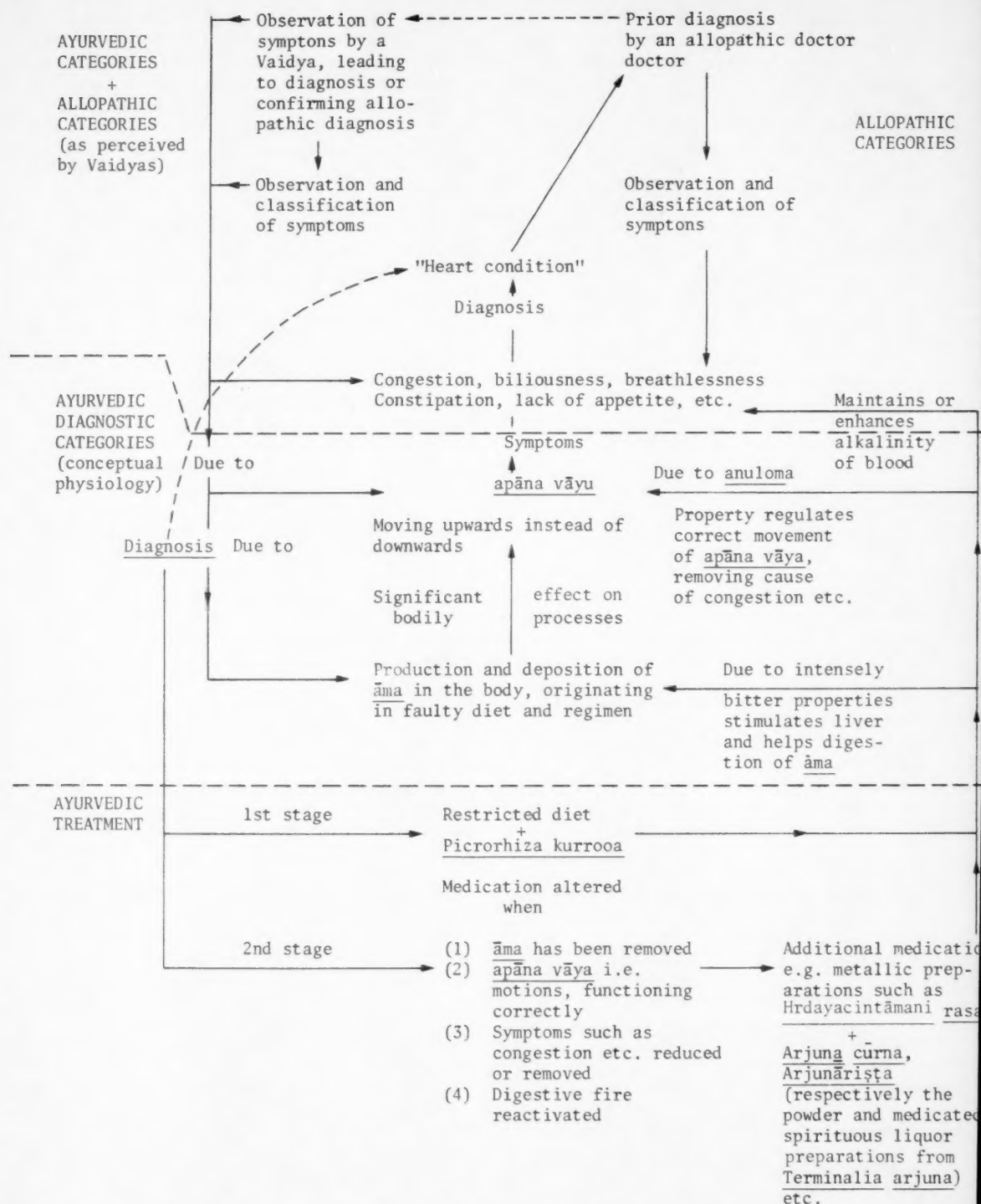


Fig. 2. Schematic view of treatment of a 'heart condition' in Āyurveda showing the interaction of allopathic and Ayurvedic categories. Actual medication (particularly at the 2nd stage) might be more varied.

something of the modifications of the classical doctrine that have occurred through time, or as a result of different traditions.

Terminalia chebula was one of the most widely used digestives in the treatment of āma. One of the 10 or so

Sanskrit synonyms for this drug is *abhayā*, (from *bhayaṃ* = fear, danger), meaning that it could be used without danger or fear of side-effects. (This claim, though, was made for all Ayurvedic drugs.) A tag often quoted to me in this context was '*abhayā tv*

āmapācanī—i.e. *Terminalia chebula* is a digestive of *āma*. I have not been able to trace the source of this quotation, but it indicates the reputation of this drug in General Practice, though it had many other properties and uses. In this context it was widely prescribed in abdominal disorders associated with *āma*, for example colitis, flatulence, typanites (these are the terms that were used); and particularly in diarrhoea of *āma* origin (or *āmātisāra*) called 'dysentery' by some Vaidyas. The most important symptoms in this condition were that the stools were heavy and/or sticky, and had a very bad smell. I do not know how 'dysentery-type' or 'āma-type' of diarrhoea were differentiated from 'ordinary' diarrhoea. (The passage of blood in the stools, regarded as one symptom of dysentery in allopathy, was not mentioned in this context) [39].

Diarrhoea of *āma* origin was not checked immediately by astringent or other drugs, otherwise the retention of morbid matter would give rise to complications. *Terminalia chebula* could be administered to digest the *āma* prior to further medication, and the simplest mode of administration was to give the powder of the dried fruit with warm water. According to my teacher the ability of *Terminalia chebula* to digest *āma* could only be accounted for in terms of *prabhāva*, i.e. the 'unknown power' (*acintaya śakti*) by which a drug acts in a certain manner, ascertained empirically, but which cannot be accounted for in terms of the prior classification of its qualities into *rasa* (taste), *vipāka* ('post-digestive action') and *virya* ('potency').

The prescription of *Terminalia chebula* in this instance is interesting because my teacher gave C.S. Cik, 19, 13–18 as the reference. However, these verses advocate *Terminalia chebula* for its purgative qualities in treating *āmātisāra*. His interpretation may have been merely a slip of memory; but at the same time it revealed the context in which *Terminalia chebula* was usually administered. In severe *āma* disorders, where the body was held to be in the *sāma* state, purgatives were counter-indicated. It was considered that 'all seven' body elements or *dhātu-s* described in the classical doctrine, namely nutrient fluid, blood, flesh, fat, bone, marrow and semen, were affected by *āma* in such cases, and purgation would only cause complications. Though Western anatomy and physiology were largely accepted by these Vaidyas, the pervasion of the body by *āma* was expressed—whether literally or figuratively—in terms of 'all seven' body elements being affected. An example of such an *āma* disorder would be *āma-vāta*, i.e. the rheumatic/arthritis syndrome of diseases, for which the application of digestives was an important part of treatment.

On the other hand, *Terminalia chebula* was widely taken as a laxative or to counter 'gas', either very early in the morning in the former instance, or after meals in the latter. I knew a teacher of English, who never consulted Ayurvedic practitioners, but who took *Terminalia chebula* for 'gas' troubles (she bought the medicine herself at an Ayurvedic pharmacy). The *Caraka Saṃhitā* in fact describes *Terminalia chebula* as possessing *anuloma* properties, among others [40] and this is consistent with its wider, popular usage. It would appear that in the context of severe *āma* disorders (possibly requiring hospitalization), *Terminalia*

chebula was most valued as a digestive of *āma*. In a more general context, at the preventive level, it was regarded as a useful (mild) purgative and corrector of 'gas' troubles.

Terminalia chebula had many others uses, but it was widely prescribed, soaked in castor oil, for its ability to digest *āma* in the *āma-vāta* syndrome of disorders, as well as *vṛddhi* (identified with hydrocele) and *grghrasī* (identified with sciatica). This mode of administration was considered effective in all *vāta* (wind) disorders associated with *āma*; particularly as *Terminalia chebula* was considered 'hot' in potency and would therefore counteract the morbid wind, which was 'cold' in its effect on the body.

In this section I have tried to demonstrate how the diagnosis of *āma*, at varying levels of severity, determined the type of regimen and medication applied to patients. I have also indicated how allopathic physiology etc. was assimilated to the Ayurvedic concepts of bodily processes, and how this in turn may have affected the interpretation of the classical doctrine.

PARALLELS BETWEEN CLASSICAL CONCEPTS AND POPULAR CATEGORIES

In this section I will discuss the relation of the classical notions of ripe and unripe with the more popular and broader classification of 'perfect' (*pakka*) and 'imperfect' (*kacca*) foods (Hindi: *pakkā*, *kaccā*). This comparison was repeatedly made to me by my teacher.

These Gujarati terms, while literally meaning raw and cooked in the vernacular, define the categories of 'perfect' and 'imperfect' foods, and their relative susceptibility to ritual pollution. The 'imperfect' foods—everyday foods—are either boiled or fried, and may not be received from a lower caste. 'Perfect' foods, made from sugar or milk, and cooked in *ghī* (clarified butter), have a greater resistance to ritual impurity and pollution, and might therefore be accepted from a lower caste.

In the course of time these words have acquired a much wider meaning, not limited to the ritual classification of foods, and indicate on the one hand precariousness and imperfection, and on the other solidity, perfection, etc. [41].

Although the classification of 'perfect' and 'imperfect' foods and the associated concepts of purity and pollution, are most probably as old as Indian civilization, and must have been known to the founders of Āyurveda, they play little or no part in the Ayurvedic classification of foods and their metabolic properties. This remarkable feature, which is a major problem in the study of the origins of Āyurveda, is still retained in modern Ayurvedic practice.

Thus, the stages of digestion described in the classical texts apply to all foods, whether raw or cooked, *kacca* or *pakka*. No Vaidya I talked to claimed that *kacca* ('imperfect') foods were more likely to give rise to disease than *pakka* ('perfect') ones. If anything the 'heaviness' associated with some *pakka* foods (*lāḍu-s*, sweets, etc.) would be more likely to cause digestive troubles than *kacca* foods [42]. As we have already noted (above), one feature of the treatment of *āma* and/or weakness of the digestive fire was to put the patient on a light diet, such as cooked rice, *dāl*,

khicadī, etc.—all *kacca* foods. Furthermore, when describing different bodily states, practitioners always used the Sanskrit terminology *āma-pakva*, for unripe and ripe, and they did not resort to the commonest Gujarati equivalents, *kāca* and *pakva*. Nor, for that matter was the *kacca-pakka* terminology used in the clinical situation to describe the relative states of digestion etc. What intrigued me was that, as a general principle, the *āma-pakva* categories were described as being similar or analagous to the *kacca-pakka* classification of foods.

It is not difficult to see how the Sanskrit terminology of *Ayurveda*, using the *āma-pakva* contrast to describe bodily processes, can be related to similar terms in the vernacular. Where *pakva* denotes the states of 'ripeness', 'maturity' in the conceptual physiology, the vernacular usages (cooked, ripe, mature etc.) lead to the broader classification of *pakka* foods, with the associated values of perfection etc. Similarly the Gujarati term (*kāca*) for unripe, immature, partly cooked, etc., parallels the Ayurvedic terminology, and is related to the classification of *kacca* foods, with the broader associations of imperfection, precariousness etc.

While the notions of *kacca* and *pakka* in the external world describe the distinction between two classes of prepared foods, and their associated values, the *āma-pakva* categories within the body refer to relative states in the process of digestion. The significance of the *āma-pakva* classification is primarily in terms of the relative ripeness or maturation of the juice (i.e. *rasa*) which is prepared in the stomach. These associations can take us back to the world of the kitchen as well, particularly when we bear in mind that before the professionalization of *Ayurveda* through the medical colleges, and the production of medicines in large factories, modelled on their allopathic counterparts, all Vaidyas made their medicines at home. In Sanskrit and Gujarati the word *rasa* means not only food-juice, but also the expressed juice of a plant. The traditional preparation of decoctions, *ghī-s* and oils; the slow cooking and maturation of juices from plants freshly collected in the jungle; these associations are present as well in the notion of *rasa* [43].

We have seen that if the food-juice (*rasa*) is unripe it gives rise to *āma*; and in a looser sense may be considered as imperfect. It is thus possible to see why the Vaidyas compared *āma* with the notion of *kacca*, particularly since *kacca* has a broader connotation than that of ritual imperfection and can be applied to objects having no connection whatever with food [44]. There is a similar parallel between *pakva* ('ripe') and *pakka* ('perfection'). However, it must be emphasized that in discussing the digestion, the Vaidyas would always use the *āma-pakva* categories. The use of *kacca* and *pakka* here was intended as an analogy, to explain more clearly the difference between the 'unripe' and 'ripe' states of the food-juice.

This cluster of values (ripe, unripe; perfect, imperfect) also has its counterpart in the classification of stools. From the clinical point of view they are an external means of ascertaining the relative perfection or imperfection of processes occurring within the body. The solidity and form of the 'perfect' stool are seen as by-products of the vital juices which have been 'ripened' in digestion. The perfect or 'ripe' stool

also floats, and is relatively odourless. By contrast the 'unripe' stool lacks 'perfection', not only in terms of the faulty processes that have produced it, but also because of its stickiness, bad smell and lack of distinct shape. Such a stool is heavier than the 'ripe' of perfect stool. This contrast provides another level of reference with the body as a whole. According to the *Caraka Samhitā* it is eating in excess, with the accompanying feeling of heaviness, that frequently results in the production of *āma* and heavy, imperfect stools. Eating in correct measure, on the other hand, results in a feeling of lightness, and the stools are clearly formed without stickiness and, possessing lightness, they float [45]. The 'ripe-unripe' contrast in the description of stools therefore provides another reflection, in the realm of totally polluting substances, of those values of perfection and imperfection also expressed by the *kacca-pakka* terminology.

Further parallels are to be found in the concept of the gastric fire, and the idea of a correct diet. Sri Bāpālā G. Vaidya emphasised the traditional identification of food (*annam*) with Brahma, from which it followed that food was to be regarded as sacred and holy. The digestive fire (*jāṭhara agni*) was also regarded like the sacrificial fire (*yajña*), and such notions are also widespread outside the Ayurvedic literature. It is interesting to note that in the *Caraka Samhitā* the man who feeds his gastric fire correctly is compared to an *āhitaṅni*, the Brahmin who maintains a perpetual (i.e. sacred) fire in a family [46].

Such an attitude to food and the digestive fire has two results, which are complementary. First the quality or purity of food is very important. As fuel with which the digestive fire is tended, it should be as pure as possible, since no unwholesome articles should be put on the fire (Digestive Fire = Sacred Fire). Secondly it is important to eat in the right conditions and with due concentration. The digestive fire is then fed correctly, in the proper manner, and proper digestion occurs. This analogy between the sacred and digestive fire was made again by my teacher when we read the chapter where attention is given to the correct preparation of food and its consumption in right measure, pleasant surroundings etc., conducive to correct digestion [47].

It follows that if such an identification is made, the 'fire' must be fed with the purest fuels. Secondly, and overlapping with this is the requirement that food be correctly prepared from the best ingredients, and that it be consumed in circumstances promoting proper digestion and health.

In the *Caraka Samhitā* and other classical texts, food is not described in terms of ritual 'purity', but its wholesome (*hita*) qualities. A wholesome diet is defined in rational terms dictated by the qualities of the food and the constitution of the person who consumes it. Attention is also paid to the freshness and cleanliness of foods, their correct or compatible combination and preparation, and their consumption in the right measure etc. In other words, wholesome food is that most conducive to the health of the individual. Such an approach to diet does not of course preclude the classification of foods in ritual terms of relative purity, of 'perfection' and 'imperfection'; but as we have already noted, this classification is not found in the essentially rational (i.e. non-ritual)

whether vegetarian or non-vegetarian), the Brahmin is regarded as the model of Sanskrit learning, of which Āyurveda is a part.

Because Sanskrit learning enjoys a high prestige in the society as a whole, the use by the Vaidyas of Sanskrit terminology reinforces their authority with the patients. This could be regarded as an example of the hierarchical principal in Indian life. However, according to a tradesman I knew, the use of Sanskrit was designed both to impress and mystify the patient. This perhaps resembles the use of Greek names for diseases by doctors in cosmopolitan medicine.

In this section I have tried to indicate the different levels at which the *āma-pakva* categories, as used in contemporary Ayurvedic practice, can be applied. I have also demonstrated how these categories can be interpreted or expressed in the language of perfection and imperfection, originally derived from the vernacular classification of foods. It will be remembered that this analogy was suggested by my teacher, Sri Bāpālā G. Vaidya. I discussed the significance of the gastric fire and wholesome diet in theory and practice. In addition I indicated how the rational classification of foods in the classical system of Āyurveda affects, and is affected by, the ritual notions of purity and pollution in contemporary society.

CONCLUSION

In this paper I have described the nature and significance of the *āma-pakva* categories in contemporary Ayurvedic practice in S. Gujarat. In the first section I outlined the place of these categories in the conceptual physiology of Āyurveda, as well as the perceivable symptoms to which they were related. I described the relation of the *āma-pakva* classification to the 'gastric fire', and the significance of this relationship for the disease typologies used by different Vaidyas. I have indicated something of the Sanskrit tradition and etymologies that were drawn on by practising Vaidyas in their explanations of *āma* and *pakva*. A consideration of contemporary Ayurvedic practice must take into account the impact of Western medicine. Where relevant I have shown some of the levels at which 'medical pluralism' has occurred in the interpretation of the notions of *āma* and *pakva*. I have suggested that in general, allopathic knowledge is assimilated to the basic categories of Āyurveda.

I have also discussed the classical sources from which the *āma-pakva* categories were derived, particularly the *Caraka Samhitā*. I have indicated the importance practising Vaidyas, particularly Sri Bāpālā G. Vaidya, placed on the relevant passages from this text. I suggested that later compilations may also have contributed to the emphasis and interpretation that the *āma-pakva* categories receive in contemporary practice.

In the second section I described some of the procedures and medications used to rid patients of *āma* prior to the application of medicines for specific diseases. I showed how the use of certain plant drugs was determined not only by their properties (defined in terms of taste, potency etc.), but also by their effects on certain processes in the conceptual physiology that were responsible for specific diseases. I gave a sche-

matic account of the treatment of 'heart disease' to illustrate this.

In the third section I illustrated and expanded the point made by my teacher, that the nature of the *āma-pakva* categories can be most readily understood by analogy with the *kacca-pakka* (i.e. vernacular) classification of foods. I examined this relationship at various levels. I would suggest that the Ayurvedic concepts of ripeness and unripeness have parallels with the vernacular values of perfection and imperfection, that are not found in the practice of Cosmopolitan medicine. If I had investigated the notions of sickness and health among the general public in S. Gujarat, I could perhaps have amplified this section of the paper more fully.

One can only speculate whether the values and practices of the wider society were somehow absorbed into Āyurveda in the distant past, or whether 'diffusion' occurred in the reverse direction. Perhaps both processes occurred to a greater or lesser extent.

It was not possible either, to establish a clear priority *vis-à-vis* theory and practice. I have attempted to show that, for the practitioners I studied with, the one was indispensable to the other. The interpretation of the classical theory was undoubtedly affected by factors present in contemporary practice e.g. the influence of cosmopolitan medicine. On the other hand, the approach to practice was influenced, if not largely determined by, the contemporary image of the classical tradition. In dealing more specifically with the *āma-pakva* categories, I have relied primarily on the interpretations of these categories given by the Vaidyas themselves who practised in S. Gujarat. In the course of this paper I have also discussed some of the interactions that occurred in their application of the classical doctrine. However, it is possible that practitioners in other parts of India, or even different parts of Gujarat, may draw on other traditions.

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9. See Mayrhofer M. *A Concise Etymological Sanskrit Dictionary*. Winter, Heidelberg, 1953–79. Mayrhofer derives *āmayah* from *amīti*, *amīva* (p. 76). *Amīti* means 'presses on' etc. and along side this, 'forcefully ensures', while *amīvā* f. means disease, pain (from *amīti*) (p. 44). Another of Bāpālājī's etymologies is also given: *āmah* m. = sickness, disease, from *āmah* = raw, uncooked. However this derivation is described as 'not attested in the literature' (p. 77).
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13. *ibid.*, p. 417.
14. *ibid.*, p. 21.
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16. C. S. *Vim*, 2, 7.
17. C. S. *Sūtra*, 28, 7-(1).
18. Meulenbeld, *op. cit.*, p. 618.
19. See C. S. *Vim*, 2, 17: "That part of the human body which lies between the navel and the nipple line is called the seat of digestion (*āmāśaya*). It is here that all that is eaten, masticated, drunk and licked up is digested."
20. C. S. *Cik*, 15, 6–11.
21. C. S. *Sūtra*, 26, 42–3.
22. See Bieler H. G. *Food is Your Best Medicine*. Vintage, New York, 1973.
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24. C. S. *Vim*, 3, 43–4.
25. *Vamana* is one therapy used as part of the third kind of *apatarpana* described in the *Caraka Samhitā*, namely *doṣāvasecana*. This comprises "measures bringing about the effusion of the morbid entities, resorted to when the morbid entities are present in copious amounts" (Meulenbeld, *op. cit.*, p. 440).
26. See Pocock D. *Kanbi and Patidar*, p. 16. Clarendon Press, Oxford, 1972.
27. *Śamana* are appeasing agents or medicines, which pacify the deranged state of the humours, without increasing the secretions. These are contrasted with *śodhana*, which are purifying agents or medicines, that remove collections of bad humours and discharge them by the excretions. See Meulenbeld, *op. cit.*, pp. 506, 511. The former type of medication does not have to be applied in hospital, though the example I give often was in Surat. The *śodhana* therapy, on the other hand, was often applied to the hospitalized cases, where the illnesses were more severe. However, I would not make a hard and fast rule about this, though there may be different traditions in other parts of India. See Zimmermann, *op. cit.*, 1978a, p. 13.
28. Meulenbeld, *op. cit.*, p. 618–9.
29. See for example, the entry entitled "Heart Failure" in Brown J. A. C. *Pears Medical Encyclopedia*, pp. 352–3. Sphere, London, 1977.
30. See C. S. *Sūtra*, 26, 43-(13).
31. C. S. *Sūtra*, 27, 30–40, and *Cik*, 26, 78.
32. C. S. *Cik*, 26, 5–6.
33. See, for example, C. S. *Sūtra*, 30.
34. C. S. *Sūtra*, 30, 6.
35. *ibid.*
36. C. S. *Cik*, 26, 91.
37. Bāpālā G. Vaidya, 1965, *op. cit.*, p. 777.
38. *Sodhala-Nighaṇṭu* (Edited by Sharma, P. V.). Oriental Institute, Baroda, 1978.
39. See Brown J. A. C., *op. cit.*, pp. 222–4.
40. C. S. *Cik*, 1, 29–35.
41. See Dumont L. *Homo Hierarchicus*, p. 351. Paladin, London, 1972.
42. *Lāḍu*-s are sweet balls, 1½–2 inches in diameter, made of flour, jaggery and *ghi*. They are usually eaten on special occasions—and are considered heavy in digestion.
43. See Zimmermann, 1978a, *op. cit.*, p. 7.
44. See Pocock D., *Mind, Body and Wealth*, pp. 179–80. Blackwell, Oxford, 1973. Pocock observes that *kacca* is extended to mud, as opposed to brick houses, country lanes, and almost anything made of an inferior material where a superior version also exists. *Pakka* is used of macadamized roads and brick houses, as opposed to *kacca*.
45. C. S. *Vim*, 2, 6–7. The feelings of lightness or heaviness etc., in digestion are described here, but not the associated qualities of the stools.
46. C. S. *Sūtra*, 27, 346.
47. C. S. *Vim*, 1.
48. *Caraka Samhitā* (Edited by Sharma R. K. and Dash B.), Vol. I, *Sūtrasthāna*, p. 569. Chowkhamba, Varanasi, 1976.
49. C. S. *Sūtra*, 27, 35–87.
50. These may not be the only principles determining the individual's choice of diet. See Gandhi M. G. *An Autobiography*, p. 376. Cape, London, 1964, "... The many medical advisers overwhelmed me with advice, but I could not persuade myself to take anything. Two or three suggested meat broth as a way out of the milk vow, and cited authorities from *Ayurveda* in support of their advice. One of them strongly recommended eggs. But for all of them I had but one answer—no. For me the question of diet was not one to be determined on the authority of the *Shastras*. It was one interwoven with my course of life which is guided by principles no longer depending upon outside authority. I had no desire to live at the cost of them. How could I relinquish a principle in respect of myself, when I had enforced it relentlessly in respect of my wife, children and friends?"

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INTESTINAL PARASITISM IN SEMINOMADIC PASTORALISTS AND SUBSISTENCE FARMERS IN AND AROUND IRRIGATION SCHEMES IN THE AWASH VALLEY, ETHIOPIA, WITH SPECIAL EMPHASIS ON ECOLOGICAL AND CULTURAL ASSOCIATIONS

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Abstract—The prevalence of intestinal parasitism in seminomadic pastoralists affected by river basin and irrigation developments is studied in relation to cultural and ecological factors. Five ethnic groups representing six cultural-ecological situations are studied in the Awash Valley of eastern Ethiopia. Sanitation level and other parasite transmission parameters in each of the six study populations are assessed by using a simplified semiquantitative system of scoring for variables. Results are examined to analyze the occurrence of infection in pastoralists largely continuing their traditional way of life and in tribesmen who settled in and around irrigation schemes and became farmers or farm laborers, and to evaluate some disease control measures. Prevalence of infection in the indigenous peoples is compared with that in migrant farm laborers from the Ethiopian highlands and the physical and cultural environment of the schemes and the Awash flood plains is examined to assess disease hazards created by the new farms and to make recommendations for parasitic disease control.

INTRODUCTION

With the development of tribal lands in Africa for large-scale mechanized agriculture and water resources projects local populations are often displaced by or encouraged to settle in new schemes, resulting in profound changes in their way of life [1,2]. Associated changes in the physical environment and population distribution due to land development frequently result in increases in the transmission of soil- and water-related parasites [3-5]. Although well designed disease control programs in irrigation schemes, around manmade lakes and other development areas must be based on detailed parasitological, ecological and human behavioral studies of all local populations [6,7], few systematic investigations have been carried out among subsistence farmers and none among pastoralists.

In the Awash Valley of Ethiopia the indigenous peoples had developed a way of life well adapted to the soil and grazing resources of this semiarid-to-arid region. Pastoralism declined as a result of profound environmental and cultural changes caused by river regulation through construction of high dams and commencement of irrigated agriculture after about 1950, as well as by the droughts in the 1970's. The indigenous people have thus become increasingly dependent on the new farms, which employ and settle some of them but primarily use migrant farm laborers from different ethnic groups in the Ethiopian highlands. The natural physical environment of the Awash Basin, which constitutes the central part of the Ethiopian rift valley system, is dominated in this arid and semiarid lowland region by savanna, woodland and subdesert steppe, volcanoes and basalt flows, with several marshes, swamps, lakes and dense riparian

forests on the Awash flood plains. Nearly all the land above 1800 meters elevation in the surrounding humid highlands is cultivated by the Amhara and Oromo (Galla). The Awash River and its largest tributaries, the Kesseme, Kabena, Arba Dima and Borchenna, are the only perennial water courses in the lowlands (Figs 1 and 2).

This paper describes and analyzes prevalence of intestinal parasitism in seminomadic pastoralists, subsistence farmers and indigenous farm laborers and settlers of different tribes indigenous to the Awash Valley with special emphasis on ecological and cultural associations and disease control. Earlier attempts to study the occurrence of helminthic and intestinal protozoal infections in pastoralists in this valley failed due to difficulties in collecting stool specimens [8].

The indigenous peoples of the Awash Valley

Five ethnic groups, the Jile, Arsi (Arusi), Kereyu and Ittu Oromo (Galla) and the Afar (Danakil) traditionally occupied the Awash Basin below about 1500 meters elevation, between Lake Galila and the terminal point of the Awash River, in the northeastern lowlands of the basin, outside of the study area (Fig. 1). Linguistically all groups belong to the Eastern Cushitic group [9]. Slightly over half of all Afar in the Awash Basin, an estimated 48,000, live in the large area between the Kesseme River, Awash Station and Gewani. About 6000 Kereyu occupy the adjacent area to the southwest up to Nura Era cotton scheme, where the Arsi territory begins. There are at most 5000 Arsi in the Awash Valley, many more of them living on the Somali Plateau. Perhaps 3000 Jile remain near Wonji sugar cane plantation and Lake

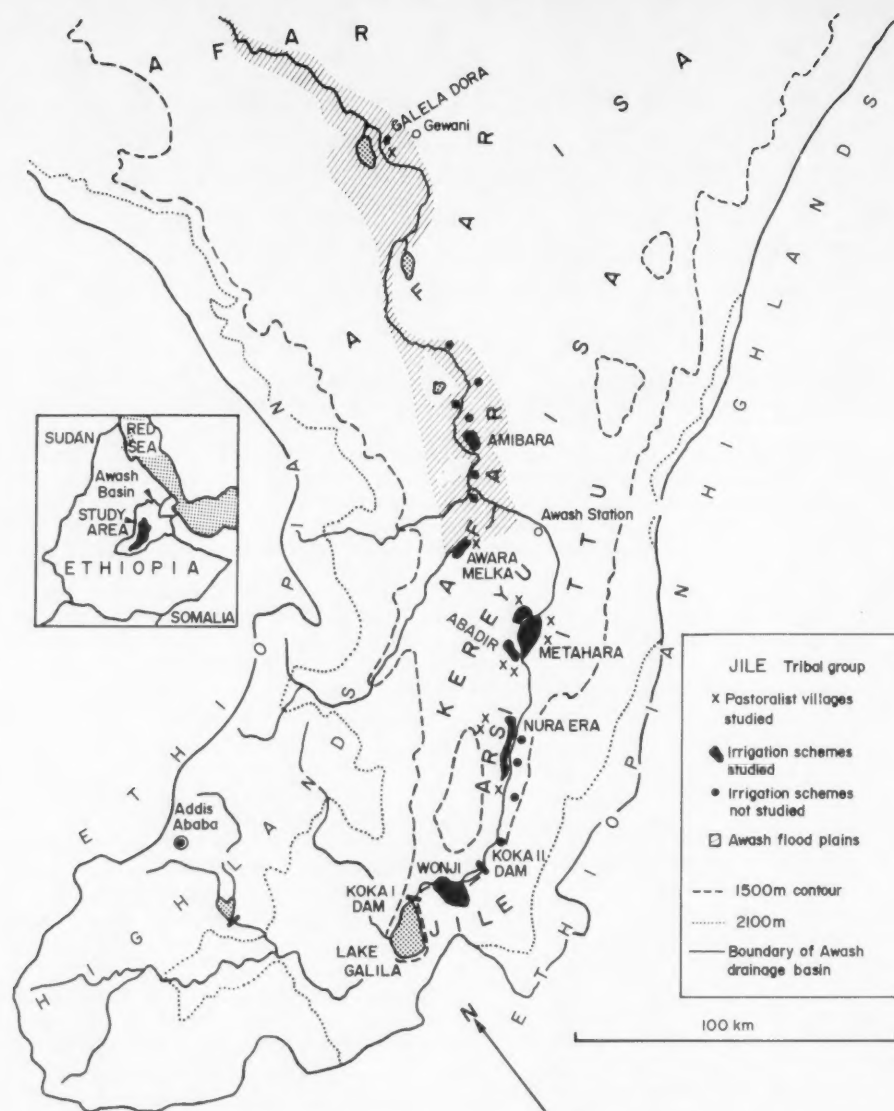


Fig. 1. The study populations in relation to the irrigation schemes and physical features.

Galila. About 90% of the 60,000 residents of the 7 irrigation schemes under study are migrant farm laborers and their families from the Ethiopian highlands. Only in GALELA DORA settlement farm do indigenous pastoralists comprise the majority of the population (Fig. 1). All indigenous peoples except about half of the Jile and Kereyu, who retain their animistic religion, are nominally Moslems [10].

All ethnic groups in the Awash Valley were seminomadic pastoralists before commencement of large-scale irrigated agriculture [11–14] and, except for the Jile, continue animal husbandry as their main economic activity. The Jile groups at Wonji sugar cane scheme lost their best grazing land to this farm and are now primarily subsistence farmers, growing maize, sorghum and vegetables. The Arsi, Kereyu and Ittu raise only a few crops on small, rain-fed fields in suitable locales to supplement their milk diet. The Afar are the most specialized pastoralists. Seminomadic

pastoralism in the Awash Valley involves raising cattle, camels, sheep and goats, seasonal migrations between the permanent settlements along the Awash River and the wet-season grazing areas, living in characteristic hemispherical reed huts and little occupational specialization except along age and sex lines. All tribes have lost much of their best grazing land, the shortgrass savanna, riparian forests and marshes, mostly on the Awash flood plains, to mechanized agriculture. This development, together with the construction of the two Koka high dams and the 1972–73 drought resulted in reduced flooding of the Awash plains and degeneration of the grazing lands, great loss of livestock and human lives which caused many survivors to move near the irrigation schemes, where they are becoming farm laborers and permanent settlers. This situation was aggravated by the further reduction of the Afar and Ittu territories as a result of the expansion of the pastoral Isa Somali tribe toward

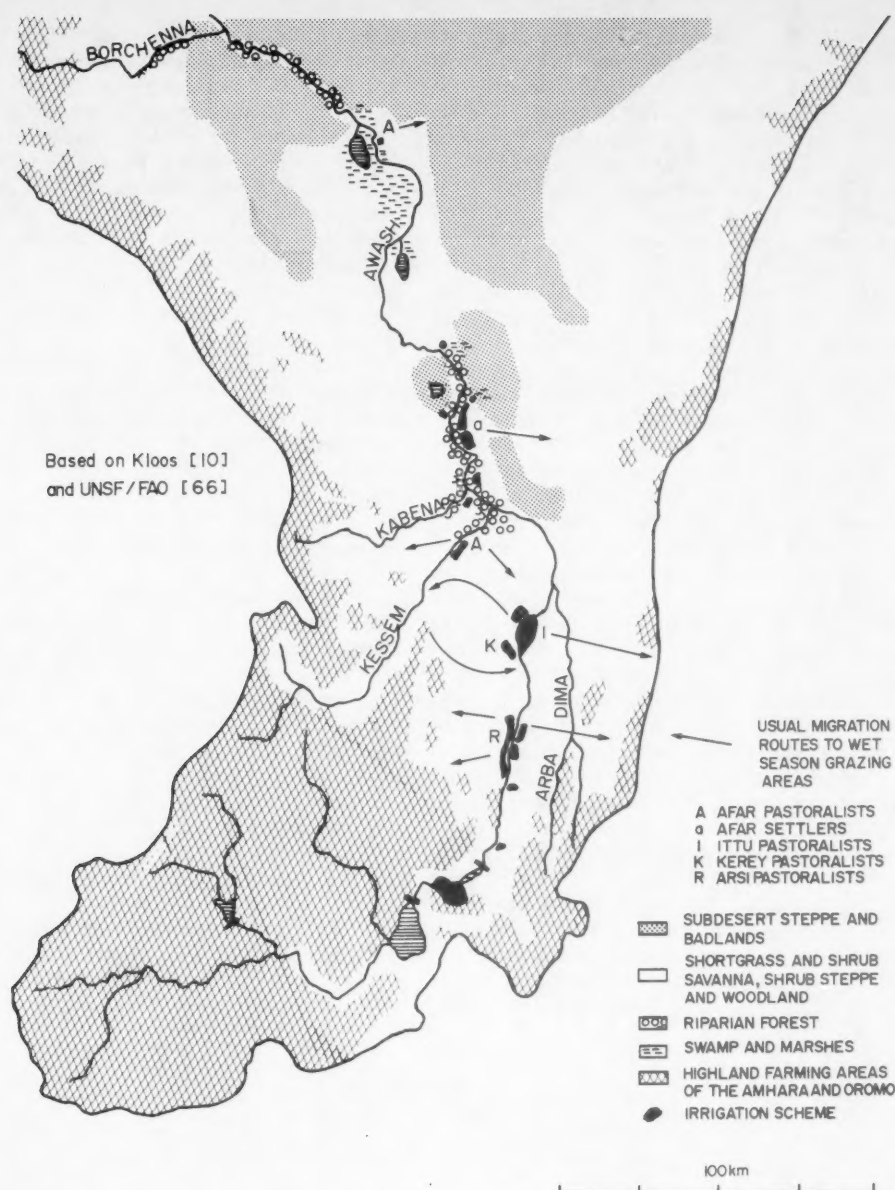


Fig. 2. Seasonal migration patterns of pastoralists, major vegetation zones and land use in the Awash River basin.

Gewani, Amibara and Awash Station and the extension of highland subsistence farming and charcoal production into the woodlands and savannas below 1500 meters, especially in the more accessible and cooler upper part of the valley [10, 14] (Figs 1, 2). Similarly, the establishment of Awash National Park between Metahara scheme and Awash Station drastically reduced the grazing area of the Kereyu and Ittu. Whereas the size of the social unit of pastoralists maintaining their herding way of life is small and contact between groups minimal, those who settled in pilot settlement schemes (Afar) or who work as farm laborers (Arsi) or subsistence farmers (Jile) live in crowded settlements and increasingly come into close contact with the large migrant populations from the

highlands. The various pastoralist tribes fiercely compete for the dwindling grazing resources and do not intermix. Even when settling in irrigation schemes the individual groups remain within their own tribal areas. Only the Kereyu and Ittu have developed close ties and members of both groups occupy most villages in the vicinity of Metahara sugar cane scheme (Fig. 1). They are thus considered as one group in this study.

The surveys

Twelve villages and camps of pastoralists maintaining their traditional way of life and their kinsmen who had become settlers, farm laborers and subsistence farmers were repeatedly visited during 1972-73 and 1975-76 as part of an extensive schistosomiasis study

in the Awash Valley and the surrounding highlands [10, 15]. They are the Jile village of Checka, which is inhabited by about 800 subsistence farmers and located at the periphery of Wonji sugar cane scheme, three villages of Arsi pastoralists near Nura Era scheme (a total of 600 inhabitants) and four labor camps inside Nura Era scheme, housing a total of 350 Arsi farm laborers and their families, and also 2000 migrant farm laborers from the Ethiopian highlands, five villages of Kereyu and Ittu near Abadir cotton and Metahara sugar cane schemes (1200 total) and one village each of Afar settlers in Awara Melka (200) and Amibara (300) pilot settlement schemes and one village of Afar pastoralists in Galela Dora farm (600). Information on subsistence activities, including seasonal migrations and farming practices, environmental sanitation, water use and quality, settlement patterns and housing conditions was gathered during many trips to the Awash Valley. In 1976 stool specimens were collected with the help of tribal chiefs and elders and farm managements. Attempts were made to obtain specimens from representative age groups and both sexes of all populations studied by asking tribal chiefs and elders in the pastoralist settlements to assemble all inhabitants present for physical examinations by the medical doctor (G.D.). After symptomatic treatment for malaria and common skin and eye infections attempts were made to visit every third inhabited hut in accompaniment of a headman and to give labelled plastic containers to all inhabitants for specimens. The absence of some adult males and the reluctance of many females to provide specimens made it necessary in most settlements, especially those of the more conservative Afar and Arsi pastoralist groups, to include all persons who volunteered. As a result children and older males were over-represented in the samples. The confinement of the stool surveys to the dry season (November–April) assured that a maximum number of adult males could be studied

who normally do not leave the permanent villages for the wet-season grazing grounds before the large rains in June or July. Assuming that 4.8 persons on the average inhabited each hut, as among the Afar [14], the proportion of the various village populations submitting specimens ranged from 6.8% (Afar pastoralists) to 10.0% (Kereyu/Ittu pastoralists). In the labor camps on the irrigation schemes samples were more representative since every tenth household could be included with the assistance of farm managements and camp foremen. One stool specimen was collected from each individual immediately after distribution of specimen containers. Specimens were preserved in 7.5% formalin and examined separately at the Institute of Pathobiology and the Awash Valley Authority laboratories by two technicians using the Ritchie concentration method [16]. Information on age, sex, place of birth and duration of stay in the settlements was obtained and, in the farm labor camps, the occupation and tribal affiliation of individuals was determined during these surveys.

The relationship between cultural and ecological factors, sanitation and prevalence of intestinal parasitism is analyzed using the semiquantitative scoring system developed by Dunn [17], but without making egg count and studying intensity of infection. Intensity determination was outside the scope of the present study but should be made together with prevalence studies in the future to more accurately assess worm burden and the public health importance of intestinal parasitism in pastoralists, about which little is known from the literature.

PREVALENCE OF PARASITISM

Of the 533 persons asked to provide specimens 363 (68%) were able or willing to do so. Most persons not submitting specimens said that they were unable to do so, apparently due to their constipating milk diet

Table 1. Intestinal parasitism in seminomadic pastoralists, subsistence farmers, and indigenous farm laborers and settlers in the Awash Valley, by ethnic and age groups

Sample	Ethnic group	No. examined	Age group*		Sex		Percent infection												Total	Multiple infections
			1-15	16+	Ma.	Fem.	<i>Ascaris lumbricoides</i>	<i>Trichura trichiuris</i>	Hookworm	<i>Strongyloides stercoralis</i>	<i>Hymenolepis nana</i>	<i>Taenia</i> sp.	<i>Schistosoma mansoni</i>	<i>Entamoeba histolytica</i> †	<i>Giardia lamblia</i> †	Others				
Subsistence farmers	Jile	56	52	48	44	12	9	5	7	2	7	5	32	20	4	2	71	19		
Farm laborers	Arsi	35	46	54	19	16	9	9	17	0	3	3	20	9	3	6	69	8		
Pastoralists	Arsi	65	78	22	36	29	6	8	2	0	2	9	6	0	2	28	6			
Pastoralists	Kereyu/Ittu	118	52	48	61	57	3	2	3	1	1	1	10	8	4	1	32	3		
Settlers	Afar	48	54	46	36	12	6	8	4	0	2	0	0	21	6	2	42	7		
Pastoralists	Afar	41	66	34	29	12	10	5	0	2	2	0	0	10	10	2	35	5		
Total subsistence farmers and farm laborers			91	49	51	63	28	9	7	16	1	5	4	29	15	3	3	70	15	
Total settlers			48	54	46	36	12	6	8	4	0	2	0	0	21	6	2	42	7	
Total pastoralists			224	63	37	126	98	5	4	3	1	1	2	7	8	7	1	32	4	
Grand total			363	58	42	225	138	6	5	5	1	2	2	4	12	4	2	44	8‡	

* Numbers represent proportions (%) of the specimen-submitting age groups.

† Mostly cysts, due to loss of trophozoites by the formalin/ether concentration method.

‡ Represents 28 persons with double infections and 1 individual with a triple infection.

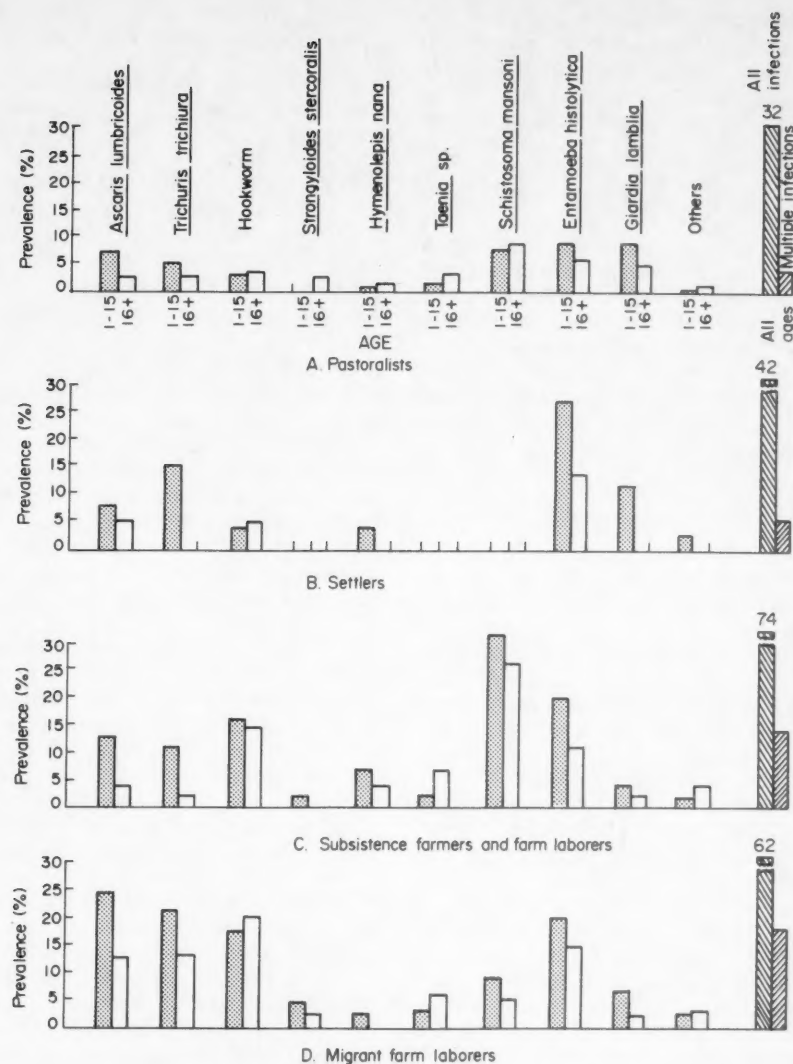


Fig. 3. Intestinal parasitism in indigenous populations of the Awash Valley (pastoralists, settlers and subsistence farmers and farm laborers) and migrant farm laborers from the Ethiopian highlands, by age.

while others considered the handling of stool beneath their dignity, an attitude earlier noted among the Afar by Lemma [8] but seldom encountered among highland Ethiopian Christians. Table 1 and Figure 3 summarize the parasitological findings of this study, which are compared with those of migrant farm laborers from the highlands [18]. The most common parasite was *Entamoeba histolytica*, found in 12% of the total indigenous study population, followed by *Ascaris lumbricoides* (6%), *Trichuris trichiura* (5%), hookworm (5%) (18), *Schistosoma mansoni* (4%) and *Giardia lamblia* (4%). The rarest parasites were *Taenia* sp. (2%), *Hymenolepis nana* (1%), *H. diminuta* (1 case) and *Strongyloides stercoralis* (1%). All infection rates were lower than those reported for migrant farm laborers in the Awash irrigation schemes [19], but *S. mansoni* (29%) and *Hymenolepis* (5%) were highest in indigenous subsistence farmers and farm laborers and *Entamoeba* (21%) and *Giardia* (6%) in Afar settlers (Fig. 3). *E. histolytica* and *G. lamblia* are probably

underreported and specific amoeba probably overreported due to the common destruction of protozoan trophozoites by the formol/ether concentration method. A more sensitive specialized technique and examination of several specimens per person would be needed for more reliable results [20, 21]. Eggs and larvae of rare helminths recorded but not included in Table 1 are those of *Iodamoeba* sp., *Trichostrongylus* sp., *Fasciola* sp. and *Balanitium coli*. *Enterobius coli*, usually under-reported during routine examination, and the nonpathogenic *Entamoeba coli* were not recorded. The Jile subsistence farmers (71%) and Arsi farm laborers (69%) were most parasitized, with lower rates in the Afar settlers (42%). Prevalence rates in the various pastoralist groups were 35% (Afar), 32% (Kereyu/Ittu) and 28% (Arsi). Hookworm and schistosomiasis were the infections with the greatest variations among tribes and between Arsi pastoralists and farm laborers (Table 1, Fig. 3). Only 28 individuals (8%) had double infections and one person harbored 3

parasites. Thus multiple infections were less than half as prevalent as among migrant farm laborers (Fig. 3). The most common combinations were *Ascaris*/*Trichuris* and *Schistosoma*/hookworm (and *Strongyloides*), the former in children and the latter in farming populations.

Sex-linked parasitism

Sex differences in infection were statistically significant only for schistosomiasis and hookworm, with higher rates in males than females ($P < 0.05$), also noted in the migrant labor population from the highlands [19]. Both are apparently occupational infections acquired in the irrigated fields, as women do not work in the fields in Ethiopian irrigation schemes, but higher prevalence of hookworm infection in males may also be due in part to hormonal, immunological and other factors [22].

Age-linked parasitism

Rates for most helminthic and protozoal infections were highest in the 1-15 age group but schistosomiasis and hookworm prevalence was slightly higher in older pastoralists, especially males (Fig. 3). Hookworm was most common in 16-25 year old subsistence farmers and farm laborers and *Entamoeba* infections were found in all age groups. Overall infection rates in the 6-15 group ranged from 26% (Afar) to 45% (Kereyu/Ittu), all significantly lower ($P < 0.05$) than in 6-15 year old children of migrant laborers from the Ethiopian highlands [19]. *Ascaris*, *Trichuris*, hookworm and *Strongyloides* infections in particular were relatively uncommon in children of the indigenous populations. The generally higher rates of helminthic and protozoal infections in children than adults (Fig. 3) are probably due to both resistance to reinfection, acquired during initial infections [21, 22] and age-linked behavioral patterns relevant to transmission. The higher prevalence of hookworm infection in most economic groups and of *S. mansoni* in pastoralists above 15 years of age is apparently due to the location of the transmission sites in the irrigated fields and along canals and the fact that few children do agricultural work in the Awash schemes [10].

CULTURAL/ECOLOGICAL GROUPS, SANITATION, WATER SUPPLY AND PARASITISM

All groups were given semiquantitative scores for sanitary status, based on habitat, means of subsistence, mobility, water supply, and house type and intravillage population density, using a poor-fair-fairly good scale (Table 2) and by considering excreta and garbage disposal, village population size, land availability around settlements, degree of dependence on farming, duration of stay in and intensity of contact with irrigation schemes and the physical environment, similar to the model developed by Dunn [17].

Excreta and garbage disposal

Excreta and refuse disposal are casual among all groups. Toddlers generally defecate near dwellings and adolescents and adults leave the settlements for fields, bushes, canals and other cover for privacy. Adequately vegetated areas around the periphery of villages throughout Ethiopia are heavily contaminated with feces [23, 24]. Parents allow children to defecate in house compounds, partly because prevailing disease concepts attribute intestinal illnesses to spoiled or improper food, eating of raw beef, poisons or supernatural causes, not to inadequate environmental sanitation and personal hygiene or fecal-borne intestinal parasites. Highland Ethiopians even consider some worms, especially *Ascaris*, to be essential for proper digestion of food and well being [25]. The few community pit latrines in the labor camps were seldom used; many people fear that the smell of excreta in latrines will make them ill. Only the two sugar cane plantations provided garbage collection and limited garbage disposal service [26].

Contamination by human feces was most noticeable in and around the crowded labor camps in the irrigation schemes and least in the low-density hamlets and villages of the pastoralists, although animal feces and flies, which can transmit *Entamoeba* to man via food, were most common in the latter. Parasite ova and larvae can remain viable for longer periods in the shaded and moist soil of irrigated fields and canal banks than on the dry, exposed savannas and steppes. The location of the villages of subsistence farmers and pastoralist settlers near irrigated fields and canals

Table 2. Living conditions of 4 cultural/ecological groups of farmers and pastoralists in the Awash Valley

Ethnic group	No. exam.	Habitat	Means of subsistence	Mobility	House type and intravillage popul. density	Water supply	Sanitary status (and score)
Jile	56	Village near sugar cane scheme (1540 m)	Subsistence farming	Permanent settlement	Mud/stick (wattle) houses—intermediate density	Drainage canal & deep well	15 poor
	35	4 labor camps in cotton scheme (1100 m)	Farm labor	Permanent settlement	Rudimentary mud/stick dwellings—high density	Canals	14 poor
Arsi	65	Tree savanna (1100-1500 m)	Pastoralism	Seminomadic	Reed huts—low density	Awash River	35 fairly good
Kereyu/Ittu	118	Tree savanna (1000 m)	Pastoralism	Seminomadic	Reed huts—low density	Awash River	33 fairly good
Afar	48	Pilot settlement farms (750 m)	Farm labor & pastoralism	Nearly permanent settlement	Moveable reed huts—low density	Canals, chem. treated water & Kessem River	26 fair
Afar	41	Grass savanna and swamps (620 m)	Pastoralism	Seminomadic	Moveable reed huts—low density	Awash River	32 fairly good

Table 3. Scoring form for the semiquantitative assessment of sanitary conditions in pastoralists, settlers, farm laborers and subsistence farmers*

Variable affecting sanitary status	Scores (from 1-5) for each variable				
Intervillage population density	High 1	2	Intermediate 3	4	Low 5
Village population size	High 1	2	Intermediate 3	4	Low 5
Land available around village	Little or none 1	Limited 2	Intermediate 3	4	Abundant 5
Agriculture versus pastoralism	Fully agricultural 1	5-25% pastoral 2	25-50% pastoral 3	50-75% pastoral 4	75-100% pastoral 5
Community mobility†	None 1	Low 2	Intermediate 3	4	5
Duration of contact with irrigation schemes	18-20 years 1	14-17 years 2	8-13 years 3	4-7 years 4	up to 3 years 5
Environmental factors affecting helminth eggs and larvae (altitude, temp., humidity, vegetation & soil type)	All favorable for parasites 1	2	Intermediate 3	4	All unfavorable 5

* Based on Dunn (1972).

† Denotes seasonal migrations to wet-season grazing areas only.

therefore poses a new health hazard for these indigenous peoples, which is also indicated by the higher infection rates in Afar settlers than their pastoralist kinsmen (Table 1).

A concentric spatial pattern of fecal contamination, similar to the one noted by Dunn [17], with toddlers and young children in the center (around dwellings), older children and adult females at the outskirts of settlements and adult males away from settlements, mostly in fields, could be discerned in several farming villages during daytime hours. In the early morning and late evening all people defecated in or just outside of settlements. Availability of land for defecation is most limited in labor camps in irrigation farms, largely due to high population density and the use of all available land for irrigation agriculture. This contributes to the concentration of contamination on the characteristically small strips of land between dwellings and the surrounding irrigated fields, along paths and canals and behind houses. Detailed studies of the relationships between contaminative behavior and occurrence of individual intestinal infections, recently suggested by Roundy [27] but so far done only by Kochar [28], are needed for a better understanding of transmission patterns and exposure risk for populations in different physical and cultural environments.

Seminomadic pastoralism versus agriculture

The intensity of contact with potentially contaminated soil and water is greatest among subsistence farmers and farm laborers. Subsistence agriculture is labor intensive, with farming operations involving exclusively manual labor and domestic animals. In the semimechanized irrigation schemes irrigation and harvesting are done largely manually, necessitating large labor forces and resulting in close man/soil and man/canal water contact. Nearly all farm laborers and subsistence farmers customarily walk barefooted, in contrast to the pastoralists. Especially adolescent and adult male pastoralists wear sandals for protection against sharp stones and thorns, which also reduces the risk of hookworm infection. Five of the six pastoralists with hookworm infections were indi-

viduals who had been working in irrigation schemes. Infection rates for all helminths whose free-living eggs and juveniles develop in and are transmitted by the soil (*Ascaris*, *Trichuris*, hookworm and *Strongyloides*) and rat tapeworm (*Hymenolepis*), which is transmitted by rat and mouse feces in food increase quite consistently with the importance of farming among the different economic groups, being lowest in pastoralists and highest in indigenous farming populations (Fig. 3). The higher prevalence of beef tapeworm (*Taenia*) infection in farming than pastoral populations is similar to the findings by Kuntz and coworkers [29] among Bedouins on the Sinai peninsula but contrasts with the situation in Kenya, where the cattle-herding Masai, Somali, Borana Oromo and Rendille are much more afflicted with this parasite than the agricultural Meru, Kikuyu, Sukuma, Samia and Kamba, although the distribution of the soil-transmitted helminths and *S. mansoni* was similar to that observed in this study [30]. In Ethiopia eating raw beef is most widespread among agricultural groups in the highlands, where taeniasis and the use of anthelmintic plant materials reach extremely high levels [31,32]. The recent droughts and dietary changes among Awash Valley pastoralists sharply reduced their consumption of meat.

Although thousands of pastoralists are now living in the vicinity of the irrigation schemes, relatively few have made the full transition from animal husbandry to farming. Even the Jile farmers, Arsi farm laborers and Afar settlers retain sizeable herds of livestock which they and their kinsmen graze on and off the farms. The irrigation schemes let local pastoralists graze their livestock on the harvested maize and cotton fields for the fertilizer this provides. A recent sociological survey among the Afar indicated that more than half of the men want to become commercial pastoralists and sell livestock for supplemental income and the other farmers [14]. The Afar settlers studied here employed highland farm laborers for most farm work, also noted elsewhere in Afarland [10,33,34], which probably contributes to the relatively low infection rates in these settlers. However,

since the devastating droughts of the 1970's the Awash Valley pastoralists feel less contempt for farmers and the farming way of life and settlers are increasingly working their own plots. The realization that the irrigated areas provided the only means for survival for many herders during the droughts and their generally successful adaptation to farm work has brought ever larger numbers to the schemes in more recent years.

Effects of irrigated agriculture on the ecology of parasites and vectors are apparent in the much higher density of aquatic and terrestrial weeds, insects, snails and birds in the Awash schemes than in the surrounding savannas, although quantitative studies of this phenomenon remain to be carried out. On a new Kenyan rice scheme a sharp increase in the density of malaria and arbovirus-transmitting mosquitoes and the prevalence of malaria and arbovirus infections and a concomitant decrease in harmless mosquitoes was noted [35]. Similarly, whereas farmers in the intensively irrigated Nile Delta have heavy helminthic and protozoal infections [29, 36], hunter-gatherers have generally lighter, nonpathogenic infections, although they may be affected by a larger number of parasites [37]. Some of the highest intensity levels of schistosomiasis have been reported from irrigated areas, in many of which it continues to spread [38, 39]. Irrigated agriculture provides potentially more favorable conditions for transmission of intestinal parasites than rain-fed agriculture, primarily due to more suitable environmental conditions and higher populations densities. This relationship is also revealed in the low infection rates of children of the once pastoral Acholi of Uganda, who are now subsistence farmers on marginal agricultural land [40].

Mobility

The high mobility of pastoralists tends to reduce fecal contamination of their settlements and exposure risk further. Most groups move once seasonally or more often with their livestock from the dry-season settlements on the flood plains, where grass and trees are still relatively abundant, to the wet-season grazing areas in the surrounding plains and uplands in search of pastures or to escape the Awash floods and mosquitoes. Most Afar clans move short distances away from the Awash River, the Ittu and most Arsi move altitudinally in a type of transhumance, and the usual migratory pattern of the Kereyu is circular (Fig. 2). All groups except the Kereyu also engage in highland grazing on crop residues or grassland by paying tribute or granting reciprocal grazing rights to highlanders, but this has become less available to pastoralists since the recent droughts and increased land pressure in the highlands [10, 34]. During the dry season individual homesteads, hamlets and villages are occasionally moved short distances for a variety of reasons or may dissolve and regroup elsewhere with other social groups because of kinship, warfare, deterioration of grazing land or other ecological factors [14, 41]. Whereas the Afar have portable huts and many clans move as whole units for the duration of the Awash floods (2–3 months), the men of the other tribes usually leave the women, children and old people behind in the permanent dry-season settlements, which are no longer in danger of becoming

flooded since they were displaced from the flood plains by the irrigation schemes. The loss of grazing land to these schemes required those pastoralists who continued their traditional way of life to migrate more often due to related overgrazing [14]. The Afar on the lush, undeveloped grass savanna and marshes around Galela Dora, however, move hardly at all. On the flood plains developed to irrigated agriculture the availability of grazing on harvested fields, employment opportunities, availability of grazing on harvested fields and the presence of medical facilities and famine relief stations are major factors in reducing the mobility of herdsmen. The Arsi farm laborers in Nura Era no longer migrate outside the scheme (Fig. 2).

The migrations taking the pastoralists periodically to the open savannas, away from the potentially contaminated dry-season settlements, are probably less effective in minimizing the fecal-oral *Entamoeba* and *Giardia* infections than the soil-transmitted helminths, due to the continuous hazard of intestinal protozoa transmission by flies, contaminated water, food and hand/mouth contact. These differences are apparent in the relatively high protozoa infection rates in pastoral nomads (Fig. 3), considering that they are under-reported. Similarly, farmers, pastoralists, fishermen and urban populations in Egypt all were highly infected with intestinal protozoa but pastoralists were much less infected with helminths [29]. The confinement of dry and wet-season livestock watering places to the Awash River, its tributaries, temporary pools and hot springs, all devoid of intermediate host snails of *Schistosoma mansoni* [10], apparently results in little infection with this blood fluke during migrations, which contrasts with the situation in the Sudan belt, where surface waters support snails and man/schistosome contact is intense, particularly during the dry season when the few remaining pools meet most water needs of pastoralists [42, 43].

The massive migrations of migrant farm laborers from the highlands, where helminths and intestinal protozoa are highly endemic [19, 31, 44], to the Awash irrigation schemes, especially during harvest time, result in the continuous importation of new infections in the absence of screening of new laborers.

Village size and house type

The villages of the subsistence farmers and the labor camps on the farms are generally larger than the settlements of the pastoralists, with 300–2000 people inhabiting the former and 20–300 the latter, although several Afar villages house more than 1000. The villages of pastoralists settling near the irrigation schemes have become larger and more compact in recent years. The once pastoral Jile of Wonji experienced perhaps the most drastic changes in settlement patterns, from the small, scattered brush and grass huts [12], which some clans still inhabit in the Lake Galila area, to the large villages of wattle type dwellings. The impact of house type on transmission of infection in the study area is probably smaller than that of village size, as nearly all dwellings have a dirt floor, lack latrines, water supply and electricity and are constructed of either mud and sticks (farmers and laborers) or sticks and mats made from *Typha* reeds (pastoralists). Farm laborers and subsistence farmers commonly wet the floor of their houses on hot days

to keep them cool and to control dust, which may enhance survival of parasite ova and larvae. Highly contaminated dirt floors in some farming communities may be a more important source of *Ascaris* infection than uncooked vegetables [45].

Water supply

Canals were the main source of water for household, recreational and religious needs of the farming populations in 1976. Washing clothes, washing hands and feet after work in the fields, bathing, ritual ablution of Moslem men, drinking and, in the large canals of the sugar cane schemes swimming and playing by children were the most common water contact activities in the canals. Improvements in water supply were hampered in part by unexpected setbacks in several schemes where the presence of highly mineralized well water prompted labor populations to use the cool and soft canal water instead for drinking and washing clothes. Most pastoralists traditionally used the Awash and other rivers instead, preferring fast-flowing waters and attributing the rising incidence of intestinal and liver diseases in man and cattle to use of canals [10]. Loss of livestock due to the diversion of toxic waste into canals in at least one scheme [46] further increased their suspicion that all canal water is unhealthful. Schistosomiasis is not transmitted in the Awash River in the study area [10] and the coliform count, an index of fecal contamination, is low in this river below Lake Galila [47]. Some irrigation schemes, including Nura Era, block the access of pastoralists to their traditional livestock watering points in the Awash River and farms on the small tributaries of this river, such as Awara Melka, divert practically all water during the dry season. In schemes where pastoralists settled canals constituted the only domestic water source. The high prevalence of amebiasis and giardiasis in children of Afar settlers in Awara Melka and Amibara (Table 1, Fig. 1) may be mainly due to the use of canal water for drinking and all household needs. Domestic and economic activities resulting in contact with surface waters are divided according to established divisions of work which relegate water carrying and cooking to women and watering large animals to men, with both washing clothes and becoming exposed during river crossings, bathing and swimming. Children of pastoralists in the Awash Valley commonly water small animals and swim in the rivers where possible. Some Kereyu and Ittu pastoralists and Afar settlers in Amibara have begun to use chemically treated water for drinking. Moslem men in the schemes commonly use the canals for ablution before prayer, an additional source of contamination.

Duration of contact with irrigation schemes

The rapidly changing cultural and physical environment in the Awash Valley requires that the duration of their contact with the irrigation schemes is assessed to better evaluate past exposure to parasites. The duration the various indigenous populations have been in contact with the farms is closely associated with the irrigation history of the Awash Valley. Thus the progressive expansion of irrigation from the

upper to the lower parts of the valley, beginning with Wonji sugar cane plantation in 1951, gave the Jile the longest contact and the Afar in Galela Dora the briefest (1 year). Most Arsi farm laborers and Afar settlers had been living on the farms for 3-6 years, but risk of infection was lower for the settlers than the laborers, due to their minimal involvement in farming, as mentioned above, and the location of their villages away from those of the migrant laborers.

Environmental factors

Environmental factors become more limiting on the survival of helminth ova and larvae toward the lower parts of the Awash Valley, together with increasing temperatures and soil and water salinity and alkalinity, and decreasing precipitation, humidity and vegetation (Fig. 2). Mean annual temperature at the upper end of the study area (Wonji, 1540 meters) is 20.7°C and mean precipitation 122 cm; corresponding values at the lower end of this area (Galela Dora, 620 m) are 27.0°C and 25 cm [10]. High temperatures are instrumental in the continued absence of *Biomphalaria pfeifferi*, the intermediate host snail of *Schistosoma mansoni* in Ethiopia, from the middle part of this valley, downriver from Melka Sadi scheme [15]. In the irrigated farms of the cooler upper valley, however, *S. mansoni* and its intermediate host snail are apparently spreading faster than any other parasite with the possible exception of hookworm. The hot, moist soil environment of the irrigated farms provides optimum conditions for transmission of hookworm, which Diesfeld [30] found to be most common in hot, humid lowland areas of East Africa. Low temperatures and aridity are damaging to its ova and larvae and hookworm infection is uncommon in the Ethiopian highlands above 2000 m [19, 44]. The strong association between farming and hookworm infection levels among pastoral groups (Fig. 3) also indicates that its transmission in the study area is largely confined to the irrigation schemes. The low prevalence of the other soil-borne helminths (Fig. 3), also noted among the Karamojong [48], several pastoralist groups in Kenya [30] and North African Bedouins and other nonfarming populations living in the desert [29, 49], reflects the dessicating effect of hot, arid environments on their ova and larvae. It is therefore not surprising that intestinal parasitism in migrant farm laborers in the Awash schemes, where environmental transmission barriers have been reduced, is more associated with labor migrations, population density, type of crops grown, type of water supply and sanitation rather than climate and soil type [19].

CONCLUSIONS

This study shows that environmental and cultural factors in intestinal parasitism in pastoralists and farmers affected by river basin and irrigation developments can be identified and quantitatively evaluated. Although the semiquantitative model by Dunn [14] of assessing sanitary conditions in settlements is a valid and useful tool, it is a rather subjective assessment and the numerical values it yields may not be equally relevant or valid for all parasites studied. In

areas where the specific environmental and human behavioral transmission parameters of the individual parasites can be revealed through in-depth studies, as those on hookworm in West Bengal [22, 28], this model should be modified to give variable weights for the assessment of specific disease hazards.

Intestinal parasitism in pastoralists and farmers in the Awash Valley is influenced by many factors directly and indirectly related to the construction of high dams, extension of the irrigated areas, associated loss of grazing land and several episodes of severe drought. Although it is not known which, if any, parasites were recently introduced or became more prevalent, schistosomiasis mansoni and fascioliasis appear to have been absent or nearly absent in earlier times [10] and the consistently lower infection rates in pastoralists than farmers suggests that the helminths and perhaps some protozoa became more widespread after the recent ecological and cultural changes occurred. The creation of conditions favorable for transmission of soil and water-related parasites in the form of extensive irrigation systems, moist, loose soil, elevated water tables, agricultural crops, weeds and pests, the change from pastoralism to sedentary farming, influx of highly infected farm laborers from the Ethiopian highlands and deterioration of environmental sanitation in the rapidly growing high-density farming settlements further supports this conclusion. Similar ecological changes have been reported from other irrigated areas in the tropics and subtropics [50]. Destruction of the remaining riparian forests on the Awash flood plains (Fig. 2) in the wake of irrigation development and gradual disappearance of the swamps and marshes as a result of dam construction and reduced flooding, while decreasing survival of parasite eggs and larvae due to greater exposure to sunlight and increased aridity, are likely to result in simpler ecosystems that favor the introduction of new disease agents and vectors [51, 52]. The concept of simplified ecosystem and increased intestinal parasitism, developed by Dunn [17, 37] for hunter-gatherers, in different parts of the world, appears to be applicable in modified form to pastoralists, who are experiencing similar ecological pressures and crowding effects. The ongoing hydrologic and vegetation changes in the Awash Valley are also destroying important food and grazing resources and building materials of the pastoralists. In the past most Afar used several aquatic plants for food, including the tuber and seeds of *Nymphaea coerulea*, and grazed camels, goats and sheep on bushes and trees on the flood plains [53-55].

Nevertheless, some health problems may be reduced as a result of continuing irrigation development and the decline of pastoralism. The prevalence of *Schistosoma haematobium* infection appears to have declined in the Afar population due to disappearance of some of the swamps, the only habitat of the intermediate host snail [55]. The rarity of taeniasis in all study populations is probably caused by the general decrease of the cattle herds, sedentarization of pastoralists and associated changes in diet, away from a largely milk/meat diet toward grains. All groups living on and around irrigation schemes have begun to use sorghum, maize and various other foods available in the farms, the numerous new markets on the

new roads and the relief stations. According to Voelkner [14], even Afar groups living far away from the schemes have included maize in their diet. Such changes in foodways may facilitate efforts to restore the ecological balance between grazing resources and domestic herds [56]. Zoonoses associated with domestic animals in Ethiopia [31] must also be expected to decrease with the decline of pastoralism. The effect of safe water supply, environmental sanitation and health services on the schemes are difficult to evaluate here, due to the lack of adequate baseline data and the inter-relationship of factors [23]. There is some evidence that the prevalence of *Giardia* infections declined during a 2-year period of the environmental health program in Wonji scheme [20].

The observed human behavioral patterns, transmission potentials and occurrence of intestinal parasitism suggest that specific disease surveillance and control programs are more urgently needed for populations which have become highly dependent on the farms than for those groups which adhere to their pastoral way of life, assuming that there is an association between prevalence and intensity of infection. The lower prevalence rates and multiple infections in pastoralists than in their settled kinsmen and in migrant laborers from the Ethiopian highlands suggest that worm burdens are lower and reinfection and clinical disease less common in the former. Low intensity of infection in pastoralists is in agreement with the findings of similar comparative studies in North and East Africa [29, 30, 40, 48, 49] and with the presumption about low density pastoral communities and their disease ecology, although this relationship cannot be varified in the absence of egg output data.

The presence of highly infected migrant farm labor populations in the Awash schemes and increased contact of the indigenous pastoralists and farmers with these farms makes the screening and treatment of all infected individuals from the highlands a prerequisite for long-term control of intestinal parasitism. The existing health centers and clinics on the schemes, when adequately staffed and supplied with diagnostic facilities and medicines, can play a central role in surveillance and treatment. Village health committees similar to those described by Isely and Martin [57] may be formed by farmers associations, which already have developed training programs in health education and provision of primary health care [58]. Programs designed to improve environmental sanitation, water supply and housing, to control vectors and to change disease-enhancing behavior through health education [19] may be expanded and implemented by local health committees. It is increasingly realized that parasitic disease control programs in developing countries must be comprehensive in scope and understood and actively supported by local populations if permanent control is to be achieved [59, 60]. Improvements in medical services alone, without efforts to stimulate responsibility of resident populations have often been unsuccessful, including in Wonji scheme [61].

It would be impractical, if not impossible, to include all pastoralists outside the farms in the control programs, due to their high mobility and cultural differences. The retention of many elements of their traditional way of life probably makes it essential that

pastoralists develop their own health resources in collaboration with health officials and support by the irrigation schemes. The use of mobile health units, successful in Masai territory [62], may enable medical teams to reach the groups in the more remote parts of the Awash Valley. The social structure of the Awash Valley pastoralists, with the clan chief as the most effective leader whose functions and power are shared and controlled by the elders and the appointed young men's associations who serve to enforce their decisions [14] should facilitate development of viable programs. However, improvement of working relations between the encroaching highland populations and the impoverished and undercompensated pastoralists is essential for their success. More social studies, similar to those by Voelkner [14] and Balıkcı [53] on persistence and change in Afar society and on the changing relationship between pastoralists and highland peoples in the irrigation schemes are needed for culture-specific parasite transmission models and disease control programs. The rapidly changing ecosystem of these new farms, where the possibility of new parasite, vector and human associations is always present, requires that these changes be monitored and the appropriate measures taken to prevent epidemics.

In future studies of parasitism in pastoralists attention should be given to measurement of intensity of infection, more precise measurement of specific disease hazards and the impact of medical services and dietary changes. The recent emphasis by anthropologists on in-depth studies of well defined pastoralists groups [63] should facilitate such work. Parasite transmission models that simulate past and present conditions are needed to evaluate ecological changes related to development projects and the impact of various disease control programs in order to provide guidelines for decision-making. Lack of appropriate field data, especially human behavioral data, has been a major problem in modelling efforts [64, 65]. It is clear that irrigation schemes, particularly settlement projects, can provide unique opportunities for disease ecology studies of pastoralists at various stages of the settlement process.

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DISEASE CLASSIFICATION IN RURAL GHANA: FRAMEWORK AND IMPLICATIONS FOR HEALTH BEHAVIOUR

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Abstract—The prime concern of this paper is twofold: to investigate how the people of Berekuso, a rural community in Ghana, classify diseases; and to examine the extent to which this classification affects the utilization of existing health care facilities. Previous research on this topic has been conducted by identifying beliefs and behaviour at the same point in time, thus confounding beliefs with behaviour. In this study, however, a two-phase interview survey of a systematic sample of households was adopted. It was found that the basis of the disease classification system is what is believed to be the cause or source of a disease. This is because the diagnosis of the cause of a disease is the most important aspect of therapy. Using the cause as the main distinguishing factor, diseases are classified into three main types—diseases which are believed to be caused by natural agents, those which are believed to be caused by supernatural agents, and those whose causes embrace both natural and supernatural agents. This classification counters some previous assertions that Africans, and preliterate people generally, classify diseases only in supernatural terms. The study revealed that the way diseases are classified affects utilization behaviour. In this regard, the knowledge of the cause of a disease allowed a fairly accurate prediction of what health care facility would be used.

INTRODUCTION

The prime concern of this paper is to determine how the people of Berekuso, a rural community in Ghana, classify diseases and the extent to which the way in which a disease is classified affects the type of medical service sought for its treatment.

In this paper the term "classification" refers to the indigenous way of distinguishing between diseases according to what is believed to be the cause in a simple, relatively undifferentiated society whose members have a close connection with nature and the soil. Such a working definition is necessary because diseases may be classified in various ways depending on the axis selected:

The anatomist, for example, may desire a classification based on the part of the body affected. The pathologist, on the other hand, is primarily interested in the nature of the disease process. The clinician must consider diseases from these two angles, but needs further knowledge of etiology [1].

The main incentive in undertaking this study is based on the fact that in contemporary Ghana two types of medical systems—traditional and scientific—exist simultaneously [2]. This means that alternative and often competing medical services are available to the people. People from traditional rural settings move between these medical services in an attempt to cope with their health problems, but their choice of which service to use at a given time may not be random. A recurring question which confronts health administrators and planners in this regard is: what determines the differential use of the existing health care services?

This question is especially pertinent in developing countries because for many diseases people do not seek the help of practitioners of scientific medicine. According to a "folk" dichotomy the belief system separates natural from supernatural etiology. The use

of traditional or scientific health care services, therefore, may depend on whether a disease is considered to be of natural origin (in the domain of scientific medicine) or of supernatural origin (in the domain of traditional healers). This may be the case because very often:

Many people needing medical care do not receive it because folk diagnosis says that the illness is one in the native curer's not the Doctor's domain [3].

The tenacity of this traditional dichotomy became evident when the investigator was attempting to persuade rural people to use scientific medical services.

During this exercise it dawned on him that any serious attempts to convert rural people to scientific health practices would require the assessment of their disease classification system in terms of its most receptive and resistant points to scientific medicine. Once this has been done, health planners will be able to design appropriate programmes to communicate needed educational information either to reinforce favourable attitudes or to modify unhealthy practices. In the long run this will help health planners to organize improved and acceptable health care for the rural communities.

The study, then, has the following specific hypothesis: classification of diseases is a function of one's social position. The formally educated tend to classify diseases as naturally caused while those without formal education tend to classify diseases as socially and supernaturally caused. This hypothesis was tested by analyzing the views of the people of Berekuso. The results of this analysis contribute to the theory of health utilization behaviour in rural Ghana.

LITERATURE REVIEW

The problem of disease classification has sometimes occupied the attention of ethnologists. Warren [4]

observed in his ethnographic study of the Techiman-Bono of Ghana that there are diseases whose causes are found in nature *mogya mu yadee* on the one hand, and those which are caused by supernatural agents *sunsum mu yadee* on the other hand. Other recent field studies in Ghana by Twumasi [5], Nukunya, Twumasi and Addo [6], and again by Twumasi [7] have also observed a similar classification system among the communities studied. In all these communities causality is the main criterion for classification, and natural and supernatural causes are recognized.

However, other early field studies which also discovered causality as the basis of disease classification did not recognize the natural/supernatural dichotomy. The studies by Evans-Pritchard and Field are good examples. They argue that Africans classify diseases only in supernatural terms. Evans-Pritchard observed that "The Azande attribute sickness whatever its nature to witchcraft and sorcery" [8]. Following the lead given by Evans-Pritchard, Field also pointed out that "According to African dogma sickness and health are ultimately of supernatural origin" [9]. However, in the light of the Berekuso survey and other recent field studies in Africa [4-6, 10], one finds that these early assertions by Evans-Pritchard and Field are too sweeping because they do not consider the fine distinctions that the people make between different diseases.

Many ethnographic studies have shown that other criteria, apart from the cause of a disease, are also used as the main factors in classifying diseases. This is expected because, as it was noted earlier, diseases may be classified in various ways depending on the axis selected. Usually the dominant modes of classifying diseases tend to be consistent with the cultural beliefs and traditions of the people. Frake [11], for example, found among the Subanum of Mindanao an exhaustive classificatory system composed of mutually exclusive categories of increasing degrees of specificity. The fundamental unit of Subanum classification is the diagnostic category labelled by a disease name. They diagnose kinds of disease, and react differently to them. In their classification system, the category of wounds, for instance, is distinguished from that of skin diseases in which inflammations and ulcers are also distinguished. The various kinds of inflammations and ulcers are further distinguished.

Gillies [12] also reports that traditional notions of disease among the Ogori of Nigeria build up into a coherent system of classification. Diseases are classified along a continuum. Certain diseases such as malaria are accepted as natural in the sense that they form part of the accepted and normal order. At the other end of the continuum are anti-natural events such as the death of a young adult. In the middle of the scale are diseases which are regarded as serious and mysterious in origin but are curable. Each of these evokes different illness behaviour, and the methods of solving them. Summing up the classification system in this regard she reported:

The Ogori classification of diseases rests on a number of dichotomous distinctions such as diviner/medicine man, herbal medicine/magical medicine, good magical medicine/bad magical medicine; private misfortune/public calamity; also of course, between witchcraft within the matricentric group and sorcery outside it [12].

One also encounters the classification of diseases as "hot disease" and "cold disease". This is relatively common. The ancient Greek classification of disease as malfunction of "humor", for example, relates the experience of illness to a conception of a universe consisting of a balance between basic elements of fire, water and air. Similarly, the Chinese traditionally conceptualize illness as an imbalance in the ebb and flow of *yin* and *yang*. This also is consistent with Confucian philosophies which see the world as balanced between hot and cold, or masculine and feminine.

Fabrega and associates have also found among the Maya Indians of Tenejapa that diseases are labelled and distinguished on the basis of signs and symptoms, but the classification scheme involves notions of source or cause. Commenting on the distinctions based on symptoms they observed:

In an experimental sense, Tenejapanecos appear to distinguish two principal states of ill health: a person can have a "strong" illness, or the illness can be "weak". These illness states appear to be differentiated primarily by the degree to which they are symptomatic and constrain the individual's pursuit of his life activities. Some distinguish a third type of illness and call it "simple". Because it is short lasting and in no way incapacitating, however, the simple variety is of little more than momentary concern to some and may not properly be regarded as a camel (illness) by others [13].

The Zinacantecos on the other hand distinguish between classes of illness using various dimensions, and each of these can be looked at as a culturally specific facet or aspect of illness. Certain diseases are seen as serious whereas others are said to be of minor consequence. Some affect only adults, others children as well. Some have known remedy, others do not; some illnesses are believed to be cured only by native practitioners, whereas others do not require his services and may require visiting other types of practitioners [14].

Some societies do not distinguish between diseases on the basis of such numerous dimensions as the Zinacantecos does. As Gould [15] noted in rural India, diseases are classified into two broad categories of chronic non-incapacitating dysfunction and critical incapacitating dysfunction. Usually, what is done about a disease seems to bear a systematic relationship to the way in which it is classified. Thus in rural India "Folk medical practices were employed whenever the person's complaints were classifiable as a chronic non-incapacitating dysfunction while doctors were being sought for complaints classifiable as critical incapacitating dysfunctions" [15].

Classifying mental illness on the dimension of severity as Gould, Chen asserts that mental illness in a rural Malay community includes three broad categories:

Gila states perceived to be a serious threat and requiring vigorous attention; chronic states perceived to be non-threatening and hence tolerable and requiring no treatment; and acute states perceived to be non-threatening but requiring attention from the *bomoh* (indigenous Malay medicine man) [16].

Though these examples of disease classification are by no means exhaustive, they show convincingly that different systems of classification exist in different

societies. They also indicate that each system must be studied in detail if health planners are to benefit from such endeavours. In-depth studies will enable us to avoid making such sweeping statements that were characteristic of some early field observations. The Berekuso study is an effort in this direction.

THE FIELD SETTING

The data used in this paper were collected as a part of a larger study that focused more generally on the folk classification of diseases and health utilization behaviour. The choice of Berekuso as the setting for the study was largely personal and convenient. Since the investigator was interested in the application of social science to the improvement of health care for rural people, it was felt that the chosen community to test the hypothesis should have typical rural features which could be easily contrasted with characteristics of an urban community. In this regard, the lack of pipe-borne water supply, electricity, a secondary school, and good accessible roads were considered typical rural features. The presence of common bondage and kinship groupings among the people were considered essential features of a rural community. Berekuso satisfied these criteria. Also, the investigator knew some people who could introduce him to knowledgeable persons in the village. This would facilitate the establishment of rapport. Moreover, substantial background materials on demographic characteristics of the people were available from the Danfa Project. These were expected to aid in collecting data.

As Assimeng has forcefully stated, "People can be better understood only when their cognitive structures about themselves, their universe, and the relationship between them and their universe have been adequately grasped" [17]. Thus, the social structure of Berekuso society will be briefly described in order to provide a background from which to view some of the social characteristics of the respondents, and a setting within which disease classification as a conceptual and cognitive aspect can be understood and interpreted in this study.

Berekuso is an Akwapim village 25 miles northwest of Accra. It lies 5 miles off the main Accra-Aburi road. The society is fairly structurally and functionally integrated. Descent and kinship groupings are the basis of social, economic, religious and political organizations. In many respects Berekuso, with a population of 927 in the 1970 population census of Ghana, and 1243 in the annual recensus survey of the Danfa Project, is an agricultural community where the people live very close to nature and to the soil. The 1970 population census of Ghana reveals that 73.8% of the economically active population were engaged in subsistence farming. Farmers at Berekuso practise mixed cropping. Various crops like maize, cassava, yam, pineapples and vegetables are grown for sale and for home consumption. The production of cocoa, which was the principal cash crop of the inhabitants, has declined steadily in recent years. Though some of the inhabitants were described as homemakers, and others as unemployed in the 1970 census, virtually every adult person at Berekuso has a farm. Also, hunting and trapping are done by men as a part-time

activity, and petty trading are engaged in by most women.

Though little technical change has been effected at Berekuso, the introduction of new ideas and institutions (such as formal education, new economic, religious and other institutional arrangements) as a result of contact with Western society have undermined and changed the established traditional values and institutions. The introduction of modern institutions like schools and clinics into Berekuso has gone a long way in weakening the traditional cosmology. The extent to which this has affected disease classification will be considered in this paper.

METHODOLOGY

In order to understand the social behaviour and cultural practices of the people in their natural setting, participant observation was the first method employed. Additionally, the investigator held several informal interviews with knowledgeable people such as the chief, the chief linguist, fetish priestesses and herbalists. All these people are generally regarded as repositories of tradition. Therefore, they are influential in defining what is the proper behaviour. They were relied on to describe and to report on the total culture of Berekuso.

After a general understanding of social behaviour had been obtained from participant observation and informal interviews, structural questionnaires and interviews using random sample and a carefully designed survey were employed in order to enable the correlation of items of the questionnaire with socio-demographic characteristics of the respondents. The survey was a relatively quick and cheap way to gather large amounts of health-related information from the people.

In order to get relatively unbiased observations, a sample frame of households in Berekuso, as at August 1974, was obtained from the Danfa Project recensus. To get a rough picture of the nature of the population, a pretest was carried out. It became evident from the pretest that respondents below 15 years could not give comprehensible answers to many of the questions. Furthermore, it was detected that certain questions were answered differently by both sexes. Based on these findings, therefore, it was decided that only households with at least a male and a female member aged 15 years and above should be eligible for selection.

There were 182 such households in all at Berekuso. Time limitations and financial constraints limited the sample size to 60 households out of the 182 households. This sample size was approximately one-third of the total number of households, and was, therefore, expected to be representative of all 182 households. A random sampling procedure was used to select the 60 households from the 182 eligible households. This was found to be convenient since sampling problems were identical within the population, and the households forming the population were available in a serially numbered form. There were 308 respondents in the sample.

During the survey, the investigator, with two assistants, interviewed people directly with the help of

questionnaires. The data gathered included socio-demographic characteristics of respondents, what they meant by disease, how they distinguished between diseases, and how they classified five diseases which they themselves had named. Questions were also asked on eighteen specific diseases with regard to causation and the method of treatment.

To ensure that the precise questions were asked, the two full-time interviewers (who were secondary school leavers) were trained to administer the questionnaires. They stayed at Berekuso throughout the survey. This enabled them to interview farmers who usually left their homes very early in the morning for their farm and returned home very late in the evening.

Pretesting the questions provided the investigator with the means of detecting and solving previously unforeseen problems in phrasing, wording and the sequence of some questions. It also indicated the need for adding some questions and eliminating others.

FINDINGS

Before dealing with disease classification in detail the respondents were first asked to define disease. This was thought necessary because the definition of disease varies from society to society since every society selects some criteria according to which people are defined as ill while others are ignored. They made a clear distinction between good health and disease. Operationally defined, disease was anything that the respondents labelled as *yadee*. It was found in the survey that the term *yadee* covered such English definitions as sickness, illness, and morbidity. All these are appropriately defined as human disorders, *nyarewa* [18]. Disease is seen as a natural consequence of man's relationship with his physical and social environment.

In response to the question "What do most people mean when they say that they are sick?" 46.8% of the respondents answered when specific symptoms of physical condition are present, 34% said when they generally feel weak and unwell, and 4.9% said when, as a result of their bad physical condition, they are prevented from performing their normal duties. Only 1.6% answered that when a condition that kills is present. The rest were combinations of the first three responses.

The interviews showed that the basis of Berekuso disease classification system is the attributed cause or source of a disease. This does not mean, however, that the cause of a disease is the only distinguishing factor. They also differentiate between serious and non-serious diseases, diseases which affect only males and those which affect only females, adult and childhood diseases, as well as preventable and non-preventable diseases. However, these distinctions are made in order to enable them to determine the causes of diseases.

The distinction between adult and childhood diseases, for instance, may give them clues to the causation of diseases. For example, it is considered inappropriate if children are affected by diseases generally associated with old age, or if an adult with no history of some childhood diseases like asthma shows symptoms of asthma. Thus when a disease which is known

to affect mostly children affects adults or vice versa, it is suspected that the disease has a supernatural cause.

Furthermore, in determining the cause of a disease, they also take into account other factors such as the events in the life of the sick person which might explain the onset of the disease as well as the number of people who are affected by the same disease at the same time. In the case of the latter, for instance, some informants mentioned that acute epidemic diseases and frequent deaths in the village are caused by the gods or ancestors. Such occurrences may indicate that the gods are not pleased with the behaviour of the people in the village. The cure of such diseases requires putting right some social, moral or religious wrong. Public propitiation of the gods and the ancestors may have to be proclaimed to this end, and the *Odwira* and *Yam* festivals that are celebrated often serve such purposes. The cessation of such diseases signifies that the gods are pleased once more with the behaviour of the people in the village. Such occurrences, therefore, serve as means for detecting threats to the society, and for reestablishing harmony in the group.

Since the people of Berekuso regard the cause of a disease as the most essential factor in disease classification, it is the most important factor determining the type of remedy sought. Natural forces must be remedied by natural procedures and supernatural forces causing illness must be normally dealt with by supernatural forces.

Using the cause as the main distinguishing factor, therefore, the respondents classify diseases into three main types—diseases which are caused by natural agents, those which are caused by supernatural agents, and those whose causes embrace both natural and supernatural agents. Diseases in the third category are believed to have variable causes depending on the particular social circumstances surrounding them.

During the interviews a female traditional healer aged 57 years described the disease classification system as follows:

Diseases in Berekuso may be classified into three main types: Firstly, there are those diseases which are caused by natural forces. Diseases like *Airidii* (malaria), *Ayamtu* (diarrhoea) and *Ntoboro* (measles) can be cured at the clinic or by herbal medicine. Secondly, there are those diseases which are caused by supernatural agents like witchcraft, sorcery and juju. Doctors cannot cure such diseases as *Bonini* (barrenness), *Nantwi pompo* (carbuncle) and *Otwa* (epilepsy). Only the traditional healer can cure them because "there is something else" in such diseases. Other diseases like *Babaso* (gonorrhoea) and *Anisobiri* (dizziness) may be caused by either natural or supernatural forces depending on the social circumstances.

When the healer was asked to elaborate on diseases in the last category she said: "*Babaso* (gonorrhoea), for example, may be caused by witchcraft, evil medicine or by contagion. When a man suspects his wife to be flirting with other men, he can get some juju medicine which he will use before he sleeps with the wife. After that any other man who sleeps with his wife can get *Babaso* (gonorrhoea). In this case the woman does not have the disease but it is the medicine of her husband which causes it. A woman who has witchcraft may bite the sex organ of a man she sleeps with

and give him *Babaso* (gonorrhoea). Someone may also contact *Babaso* (gonorrhoea) by sleeping with a prostitute. In all three instances, the fetish priest can cure them, but the doctor cannot cure the first two".

In order to get a deeper insight into the system of disease classification, therefore, respondents in the Berekuso survey were asked to mention any five diseases. They were then made to classify these diseases according to what is believed to be the cause of each. As we have noted earlier on, there were 308 respondents in the sample. It must be stated here as a methodological note that the analysis in this paper is based entirely on responses of individuals, because each individual was asked to mention and to classify five different diseases.

In this regard, the interviews yielded 1532 responses dealing with 62 specific diseases (see Appendix A). 46.6% of responses classify disease as naturally caused, 39.3% as supernaturally caused, and 14.1% as both naturally and supernaturally caused [18].

The first group of causes is the natural agents. Included in this category are specific natural agents like worms, insects and animals; inherently unhealthy environments; rapid changes in climate and undue exposure to excessive cold or heat; improper health regimen such as eating spoiled food and imbalanced diet; as well as the malfunctioning of specific organs. Hereditary diseases are also believed to be partly included in this category.

Rapid changes in climate and/or undue exposure to excessive cold or heat were most frequently cited as the causes of several diseases. An illustrative explanation of this was given by a 25-year-old Form Four student in a Training College, when he was commenting on the cause of measles. He said:

When the sun shines for quite a long time and it starts raining, the heat that evaporates as a result of the meeting of rain and heat causes measles.

The second group of causes is the supernatural agents. There are two distinct sub-types of this category. One type of agent is generally believed to be benign or good, while the other is said to be evil or malevolent. The good agents are represented by *Onyame*, and the ancestral gods or deities. It is believed that though these agents may inflict diseases on people, they do so basically with a constructive motive. That is to say, to ensure that people live the life that will bring peace and harmony within the group. For example, those who break important social and religious injunctions, such as neglecting orphans and widows who have been left in their care, or the failure to entertain strangers who may be reincarnated ancestors, may bring upon themselves and their kinsmen the wrath of the gods or ancestors in the form of diseases. The breach of taboo such as eating a totemic animal, committing incest, adultery or having sex in the bush also could cause the displeasure of the gods and ancestors. This may endanger the whole extended family since disease is regarded as a threat to interpersonal social relationships. A break in this interpersonal connection, therefore, means that one of the basic ingredients for life, as important as water or food, is gone.

Moreover, the presence of diseases within the group means that certain tasks which are important for the

survival of the group may be neglected. This is due to the fact that insofar as one is legitimately recognized as a sick person, such a person is temporarily relieved of his or her activities. If he is a father, for example, he is not obliged to work to support his family. Such a situation may lead to the rearrangement of roles within the family. Consequently, other members of the family who may be already overburdened may have to take on extra duties. This is likely to be the situation especially in cases where an illness lingers on longer than it is expected. The longer it lasts the more the group may be affected.

The attribution of disease to this type of supernatural cause makes the maintenance of good health dependent on the observance of moral and religious norms of the society. Diseases which result from such causes are seen as retribution for lapses in moral and religious observances. It is a sign that all is not well in the group and that something must be done. As Twumasi has observed in this regard:

Members of the social unit realized their intricate interdependence on their fellow relatives; therefore, a breach in their relationships threatened almost the very survival of the social unit, so health and illness became the means for detecting threats to the social unity of the group and for the reestablishment of harmony to the group" [2, p. 40].

On the other hand, witches, sorcerers and demons who are basically evil may inflict diseases that are calculated to disrupt the harmony of the group. In a setting where persons are potential targets of anger, and the jealousies of others, disease may result out of envy, rivalry, greed or bad feeling of a relative or a neighbour. A witch, for example, may strike a relative who has a bright future. Diseases like leprosy, sterility and mental illness are seen as manifestations of such supernatural powers. Such diseases may prevent the victim from pursuing his aim. They usually disrupt progress and bring disgrace to the victim.

Consequently, causal explanations take on a magico-religious form. Assimeng remarked in this regard while discussing traditional religion in Ghana that:

It is in consideration of magic and witchcraft that the influence of the spiritual realm becomes fully felt: this is especially so in instances of illness. Illness... is seen as dirt, pollution, and a danger, seen as an extension of *honhom fi* (evil spirit)... It is in this regard that ill-health is not seen in mere naturalistic terms [19].

Such beliefs are well supported by the experiences of the elder members who can give empirical examples from specific cases. An example by a 59-year-old-farmer illustrates this point:

The son of Madam A.K. became paralyzed soon on his return from abroad. He died five years ago. When a female relative was caught by *Boadee* shrine, she confessed that she and other members inflicted the disease on him because he had neglected them even though they pulled their resources together to educate him.

In a sense, therefore, this concept of disease causation can also be regarded as a social sanction. Witchcraft may operate as an effective sanction in controlling deviance from family duties. It reinforces the belief that a successful person should share whatever he has

with the family or suffer, perhaps, by way of severe illness.

Contamination by ritually unclean persons such as menstruating women, and by those with evil medicine are also believed to be magical causes of diseases like convulsion and whooping cough. Recounting an episode which occurred in the village several years ago a respondent who wanted to remain anonymous said:

Okomfo A was one day over-heard as saying that whenever he was broke (without money) all he had to do was to pick a certain leaf and burn it. Soon afterwards there will be an epidemic of convulsion in children. The victims will be rushed to his shrine, and by curing them he will thus obtain some money.

This example shows how it is thought that someone with evil intentions can supernaturally cause diseases.

Once the indigenous system of disease classification at Berekuso according to the causal criterion had been delineated, the next task was to try to determine the extent to which different individuals, varying reflecting values of the total population of which they are members, differ in the way they classify diseases. While several studies, some of which have been reviewed above, have amply documented cross-cultural variations in disease classification, much less is known about such differences within a single society. Even though knowledge about disease can be said to be generally shared within a society, it is possible, however, that if careful attention is paid to the way people look at diseases some people may be found to differ from others. It is likely that rural and urban dwellers, the educated and non-educated, the young and the old all believe that mental illness or convulsion, for example, are caused by the curse of supernatural agents? If not, who differs from whom, and why?

In this regard, an attempt was made to relate socio-demographic characteristics of the respondents to disease classification. This enabled the testing of the study's hypothesis that the classification of diseases is a function of one's social position. To this end, six socio-demographic categories were examined, namely; sex, age, educational status, marital status, religion and occupation. To the maximum degree afforded by our data, it was found that the classification of diseases varied with such socio-demographic factors. The main trends are summarized here.

When the age of respondents was related to the classification of disease, the responses showed that the younger the individuals are, the more they are likely to show a scientific attitude towards diseases. As it

will be seen from Table 1, over 54% of all those below 30 years of age classify diseases in natural terms. Conversely, less than 40% of all persons above 30 years of age classify diseases as naturally caused.

Several explanations may be offered for the association of age with disease classification. Firstly, young persons are more likely to be exposed to a modernizing factor like formal education than old persons. Many young people have taken advantage of formal education since it was introduced into Berekuso. This situation is due largely to the fact that fewer educational opportunities existed in the past for the older people as compared with the present position of the younger generation.

Moreover, the young more than the old are likely to come into contact with the modernizing influences of the outside world. This is because they have a higher propensity to migrate from rural areas than the old because the young person with the necessary skill is able to move away to attractive places such as the cities and towns to work [20]. On the other hand, older individuals may be less mobile, and much more entrenched in the traditional beliefs and practices than the young. The older people with their greater exposure to the traditional outlook are much slower in benefitting from modern medical facilities.

When sex was considered in relation to the classification of diseases it is found that slightly more females (48.2%) than males (44.7%) classify diseases in natural terms. This difference is very small (3.5%). The difference between the sexes with regard to supernaturally caused disease is even smaller (1.3%).

One would have thought that females who generally have less formal education than males would classify most diseases as supernaturally caused. A possible explanation for the reversed situation may be due to sexual differences in handling diseases within the household [21]. As females, especially the wife-mother, deal with diseases in the household more often than males (especially with diseases of children) while playing their traditional sex role, it is expected that they would more frequently come in contact with hospitals. Such contacts are likely to influence their attitudes towards diseases. Consequently, they may classify most diseases as being caused by natural agents [18].

Other interpretations of differential attitudes towards diseases among men and women include varying exposure to, and knowledge of the health care services. Women are generally found to be more experimental than men. They are more flexible in their outlook and they would like to experiment with new

Table 1. Disease classification by age

Causation	Age group (years)							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45+	
Natural agents	55.9	59.6	54.5	41.0	42.9	30.6	32.6	46.6
Supernatural agents	28.8	27.6	26.9	40.3	48.4	54.1	54.3	39.3
Both natural and supernatural agents	15.3	12.9	18.6	18.7	10.5	15.3	13.1	14.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
% No.	365	225	167	150	135	85	405	1532
% of total responses	23.8	14.7	10.9	9.8	8.8	5.5	26.4	100.0

institutions, scientific medicine being one of such institutions. To them the deciding principle in health care may be "The many gods you have the better".

Mechanic [22] observed that women may perceive more symptoms than men because they have more interest in health and more health knowledge. This, he noted, is consistent with socialization patterns which allow women to complain more readily and to appear less stoical. As he also found elsewhere [23] these sex differences in response to symptoms are apparent in children, and they increase as the children grow older. In his study of the illness behaviour of children, the two best predictors of children's reports of "fear of getting hurt" and "attention to pain" were the child's age and sex. Boys were more stoical than girls, and older children were more stoical than younger children. These findings support the idea that age and sex-role learning is important in health behaviour and attitudes towards health risks. The results are consistent also with a number of other observations, such as the higher utilization of medical facilities among women as compared with men, and the higher rate of accidents among boys as compared with girls of the same age. Varying exposure to risk factors and social stresses associated with the roles of men and women thus shape their attitude towards disease and health services.

Marital status was also found to be related to differences in disease classification. While the widowed and the divorced tended to classify diseases in supernatural terms, the single and the married classified diseases in natural terms. It is likely that age, education and exposure to modernizing influences might explain the differences between them.

The analysis of disease classification in relation to religion revealed that beliefs prevalent in a society about causes of diseases were intimately linked to religion. Moslems and Apostolics who tend to believe in supernatural causes of misfortunes resembled those who follow traditional religion in their classification system. Traditionals, Moslems and Apostolics on the other hand, differed from Catholics, Methodists and Presbyterians in their conceptions of diseases. While a majority of Catholics (60%), Presbyterians (67.3%), and Methodists (65.7%) classified most diseases as caused by natural agents, the greater proportion of Apostolics (53.5%), Moslems (55%), Traditionals (57.0%) and Jehovah Witnesses (44.4%) classified diseases as caused by supernatural agents. The differences might be due to differences in religious beliefs.

It was also noted that different occupational groups classified diseases in different ways. 51.5% of farmers classified diseases as supernaturally caused. It was posited that this was merely a reflection of their concept of the universe. Since they live very close to nature, and come in contact with many events which are difficult to explain in natural terms, they tend to have great respect for the unseen forces of nature. On the other hand, those in the clerical and lower professional occupations classified diseases mostly as caused by natural agents. This was expected. As their jobs require some formal education, it was expected that they might have been exposed to western ideas and influences. Also to legitimate the sick role, and absence from work, those in clerical jobs are usually expected to go to the hospital or clinic.

Table 2 shows the percentage distribution of attributed causes of diseases according to educational level of the respondent. 40.5% of respondents in the survey had no formal education, and 59.5% had formal education. Out of those who had formal education 16.3% had primary school education, 39.2% had middle school education. None had university education. Each respondent classified the causes of the five diseases which he or she named.

The classification of diseases in natural terms increases greatly with the level of education. While 33.1% of those with no formal education classify diseases as naturally caused, as high as 66.7% of respondents with secondary school education classify diseases as naturally caused. There is very little difference between respondents with primary and middle school education. However, the difference between respondents with elementary and those with post elementary school education is quite appreciable.

On the other hand, the classification of diseases as supernaturally caused decreases with formal education. Those without formal education (51.8%) more than those with formal education (less than 32% in each category) classify diseases in supernatural terms. A similar pattern was found by Nukunya, Twumasi and Addo [6] in their study of four communities in Ghana. In both the rural and urban communities they studied, the determining factor of disease causation was specific germs (62.5%). This was followed by evil forces (34.8%) as causing certain types of diseases like sterility, impotency, and mental illness. The educated population also associated themselves with the view of evil notion of causation although to a much less extent than the illiterate.

Table 2. Disease classification by educational status

Causation	Educational status							None/ Illiterate	Other
	None/ Illiterate	Primary	Middle	Commercial	Teacher Training	Secondary Technical	Total		
Natural agents	33.1	52.8	55.1	62.5	60.0	66.7	46.6	33.1	55.9
Supernatural agents	51.8	31.2	30.1	18.8	25.0	20.8	39.3	51.8	30.7
Both natural and supernatural agents	15.1	16.0	15.0	18.8	15.0	12.5	14.1	15.1	13.5
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No.	621	250	601	16	20	24	1532	621	911
% of total responses	40.5	16.3	39.1	1.1	1.3	1.6	100.0	40.5	59.5

Several reasons may contribute to such differences in disease classification according to educational status. Education, like age, is associated with changes in attitude. The more educated a person is, the more he is likely to show a scientific attitude toward diseases. As one secondary school leaver opined during the interviews:

The old and illiterate folks in this village believe that diseases like tuberculosis and convulsion are caused by witchcraft. I don't believe them. How can witches cause such diseases? What they need is formal education. It will help them to discard these superstitious ideas about the causes of diseases, and enable them to keep their surroundings neat so as to prevent some of these diseases.

More and more people are making use of educational facilities that have been provided in Bere-kuso. The introduction of formal education into Bere-kuso has encouraged the gradual breakdown of traditional cosmology. This is because educators in Ghana, as elsewhere, have been influenced very much by the emphasis which most social scientists place upon the function of education as a transmitter of modern ideas. In countries where traditional health attitudes have been strong, educational systems have made special efforts to overcome such attitudes as fatalism or reliance upon traditional methods of treatment. The aim has been not only to improve the health of the people, but also to motivate them for participation in a developing economy.

Thus, far from strengthening the traditional cultural practices, formal education tends to alienate the youth from the traditional society. Busia [24] has indicated that the youth may hardly understand the traditional society after leaving school, and they may become, as it were, strangers in their own society. The educated tend to look down on those who have not received formal education. As they reap the rewards in terms of their ability to participate in the benefits of modern economy, they also tend to flout traditional authority such as that of lineage heads and elders. While discussing the factors which have contributed to status anxiety and cultural revival in Africa, Assimeng observed in this regard:

Education has not only challenged people's traditional ways of seeing the world, but has increasingly enlarged the area of human aspirations. New criteria are constantly employed to challenge the earlier notions of what constituted 'proper social order' [17].

Formal education, therefore, even of primary level becomes a major force in breaking down reliance upon traditional world view and folk practices. The longer a person goes through formal education the farther he may be removed from the traditional culture. This is because as one goes through the system, he gains the necessary mental attitude (mental mobility) which enables him to view the world through the scientific process of enquiry. The causes of diseases in the scientific system, for example, are sought in the laboratory, and in the field under controlled conditions since it requires scientific proof for their substantiation.

Moreover, formal education also serves as a means for a variety of western cultural influences, such as mass communication through radio and newspapers

which are becoming pervasive even in remote areas of developing countries. For example, those who are exposed to the mass media may be more likely to overcome cultural inhibitions to the use of modern health services. As the use of the English language is becoming widespread through formal education, knowledge of and regular contact with it is also expected to transmit modern ideas.

HEALTH SERVICE UTILIZATION

To determine the crucial factors which influence the use of health care facilities at Bere-kuso, a household morbidity survey was undertaken within the same selected households two weeks after the disease classification survey. The morbidity survey showed that the way people classify diseases affects their utilization behaviour. Specifically, the perceived cause of a disease had a major effect on the choice of health services.

Table 3 shows the distribution of the medical resources employed based on what the sick person or his ward thought was the cause of the disease. As it has been noted early on, the people of Bere-kuso distinguish between three main causes of diseases—natural, supernatural, and both natural and supernatural. 56.4% of all the reported diseases were believed to be naturally caused, most notably by impurities in the blood, head or stomach (30.4%), over exertion (10.9%), by exposure to excessive heat of the sun or excessive cold (5.2%), through accidents (4.7%), and through insect bites (5.2%). On the other hand, 13.5% of all reported diseases were believed to have been caused by supernatural agents: witchcraft and juju (6.1%), breach of taboo (4.9%), and sent by ancestral gods and deities (2.5%). 30.1% of the diseases were believed to have been caused by a combination of natural and supernatural agents.

46.8% of diseases thought to be naturally caused were treated at the Bere-kuso clinic. As high as 24.8% of naturally caused diseases were not treated. These involved illnesses like malaria, headache, general bodily pains, and other diseases which the patients thought were minor. 17.4% of naturally caused diseases involved self-medication, and 2.8% were treated by traditional medical practitioners.

Most supernaturally caused diseases were treated in the context of traditional medicine. Over 60% of the diseases believed to have been caused by the breach of taboo involved self-treatment. This reflects the view that diseases resulting from the breach of taboo are part of the lay medical knowledge. Each family has its own favourite herbal recipes that have been proven over the years for treating such ills. When the family prescription proves inadequate the next choice of treatment is usually the traditional medical practitioner. With such supernaturally caused diseases, it is believed that the clinic remedies are ineffectual, or may even aggravate them. However, when such diseases are taken to the clinic, the people do so mainly for symptom relief, and they trust the traditional healer to effect the actual spiritual cure. It should be remembered, in this regard, that to most people of Bere-kuso, especially the illiterate, a disease is inseparably linked to its cause.

Table 3. Utilization of health care services according to cause of disease

Health care service	Causation							
	Natural agents		Supernatural agents		Both natural and supernatural agents		Total	
	No.	%	No.	%	No.	%	No.	%
Berekuso clinic	51	46.8	4	15.4	17	29.3	72	37.3
Other clinic outside Berekuso	7	6.4	—	—	5	8.6	12	6.2
Drug seller	2	1.8	—	—	2	3.4	4	2.0
Traditional medical practitioner	3	2.8	8	30.8	4	6.9	15	7.8
Self/family	19	17.4	11	42.3	12	20.7	42	21.8
No treatment	27	24.8	3	11.5	18	31.0	48	24.8
Total	109	100.0	26	100.0	58	100.0	193	100.0
% of total respondents		56.4		13.5		30.1		100.0

Thus, even though the symptoms and signs of supernaturally caused diseases may abate with the help of scientific medication, the subjective sense of being sick may persist so long as the spiritual cure has not been effected. One case which was recorded during the interviews may illustrate this point. An elderly woman of 57 had been afflicted lately with multiple boils. She got better after she had been persuaded to go to the clinic for treatment. However, she was still worried, and she said, in this regard:

I have never had boils since I was born, why then should I have some now? I think that there is an underlying supernatural cause. Don't you think so? Thus even though I am better after the treatment I received from the clinic, I intend to see O.O. about it. She will be able to tell me who was the cause, and why.

Though this may sound a little hysterical, it shows the anxiety of several people when they are afflicted with serious diseases. The questions "why should this happen to me at this time, and who was responsible?" are crucial questions which the seriously ill ask everywhere not only in "preliterate" societies. While scientific medicine is skillful at answering the question *how*, it is not fully equipped, at least in certain respects, to answer the question *why*. It is in answering the *why* that the traditional healer's approach to diagnosis and treatment seem quite effective because of its very personal and supportive nature [2].

It should also be noted that accidents were taken to Berekuso clinic for treatment. This might be due to its known effectiveness in dealing with acute cases. When clinic services were not available, they were treated at home. Self-treatment of accidents reflects one of the reasons given for using self-therapy—as a "first aid measure". Again it will be seen from Table 3 that the services of drug sellers and clinics outside Berekuso were used mainly for treating naturally caused diseases, while traditional medical services and self-treatment were employed for supernaturally caused disease.

Colson [25] noted a similar trend while studying the Malays in a village in Pahang. For illnesses thought to be due to natural agents 57.5% were treated in the government clinic or by physicians, 15.4% were treated by medicine vendors, 2.6% were

treated by the *bomoh*, 9.0% sought no treatment and 4.3% treated themselves. On the other hand, he found that for illnesses perceived to be due to supernatural agents 12% were treated by doctors or in the government clinic, 1.7% by medicine vendors, 6.9% treated themselves and as high as 37.4% were treated by the *bomoh*.

To find the relationship between the use of health care services and disease classification at Berekuso a chi-square test was performed (see Table 4). At a level of 1% with 1 d.f., the chi-square shows that the relationship is statistically significant (observed χ^2 is 9.016 and theoretical χ^2 is 6.635).

This study, therefore, supports the view that the perceived cause of a disease accounts for the differential use of existing health care facilities in developing countries more than any other factors because what is done about a disease usually bears a systematic relationship to the way in which it is classified.

Crucial as this observation is to understanding utilization behaviour in rural areas, people who seek to bring scientific health care to rural areas do not seem to take note of it. When an illiterate patient from Berekuso village visits the clinic, for example, he may encounter a very different orientation from his own orientation. He meets with a modern scientific view that divides the traditionally holistic and integrated view of disease. The doctor or health centre superintendent may probe him in a very precise and intensive way about the functioning of his body, but not about his moods or social relations. As a result the patient may judge the procedure as too formal and mechanistic. He may regard the doctor as an impersonal individual who is uninterested in his varied personal and social relations which he believes are crucial in causing changes in bodily states. When a patient who refused to go to the clinic for treatment, and instead treated himself at home was asked why he did so, he answered:

Why should I waste time going to the clinic while I have something to do. You spend hours waiting to see the doctor, and when you finally see him, he may not even look at your face let alone examine you. He simply writes something, and tells you to go and collect some medicine which almost always turns out to be A.P.C. or codeine.

Table 4. Utilization of health care services according to cause of disease

Health care services	Causation								
	Natural agents			Others			Total		
	No.	Column %	Row %	No.	Column %	Row %	No.	Column %	Row %
Clinic and drug sellers	(a) 60	55.0	68.2	(c) 28	33.3	31.8	88	45.6	100
Others	(b) 49	45.0	46.7	(d) 56	66.7	53.3	105	54.6	100
Total	109	100.0		84	100.0		193	100.0	

The best test for this case is chi-square (χ^2)

$$\chi^2 = \frac{N(ad - bc)^2}{(a + b)(c + d)(a + c)(b + d)} = \frac{193(60 \times 56 - 49 \times 28)}{109 \times 84 \times 88 \times 105} = 9.016.$$

Level of significance = 0.01 (1%).

Degrees of freedom = 1.

$\chi^2_1 = 6.635$ (from the table of χ^2).

Since $\chi^2_1 < \chi^2_0$, the relationship between the two variables is statistically significant with a level of 1%.

For the illiterate patient, therefore, one result of having his sickness reduced in this fashion, and of receiving interpretations about bodily matters that are viewed as insufficient and simplistic is alienation, a lack of confidence, and a lack of compliance with medical prescriptions. Instead, he goes home to look for a more understanding practitioner who speaks a language he understands and gives explanations about causes of diseases which he can accept. Thus, doctors are either not visited, except perhaps at critical stages, or their advice is ignored because of their supposedly narrow approach to disease causation. The beliefs, anxieties, and fears of illiterates (traditional rural people) about some diseases are at variance with those of the scientific system, so that the treatment received at the clinic for those diseases may not meet with their expectations. Consequently, the incentives to continue using these modern health services may not be strong enough to arouse the energy that is needed to do something which traditionally is out of the ordinary. This is because the stronger the traditional beliefs and ties of an individual, the greater his distrust of outside influences, including scientific medical care.

As Mechanic has noted, in this regard, the failure of the doctor to deal successfully with the various problems that are brought to him is supported by the persistence of competing systems of health care in developing countries. Traditional healers are frequently more attuned than doctors to the psychological needs of their patients, and often the theories of disease they advocate are culturally and psychologically consistent with aspirations of their patients. On the contrary, "scientific medicine frequently clashes with patient's cultural beliefs and view points, and with their psychological needs, and thus scientific medicine does not always take full advantage of the treatment context for bringing about patient improvement through encouragement, support and suggestion" [26].

The existence of these differing medical perspectives underlines the need for the development of new models of health care delivery that will take account of the life experiences and cultural beliefs of people

seeking health care. Since the folk medical beliefs of patients inevitably influence their relations with physicians, the influence is likely to be an adverse one when the physician does not recognize the existence of such beliefs or persists in seeing them as evidence of ignorance or superstition. When the doctor is aware of folk beliefs and is sensitive to the meaning they may have for patients, the beliefs can be used to obtain cooperation in the relationship. Recognition and understanding of folk medical beliefs and practices by the doctor does not mean that such beliefs and practices must be accepted as scientifically valid. It is only necessary to recognize that they exist, that they can influence the outcome of treatment in many cases, and that they can sometimes be used to benefit the patient.

This paper has thrown light on some of the strategies that people in rural areas employ to cope with their medical problems, and it is hoped that the analysis will be helpful in planning the delivery of health care in rural Ghana and other developing countries. However, much work remains to be done in the study of health care systems and their use by the people of developing countries. Further health utilization studies may provide health administrators and policy makers with useful information for assessing the productivity of health care systems and types of services being rendered.

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APPENDIX A

DISEASES MENTIONED IN INTERVIEWS DURING DISEASE CLASSIFICATION SURVEY

Name of disease	English equivalent	No. of responses	Perceived causes*
<i>Ebunu/Atiridii</i>	Malaria/fever	246	N
<i>Ntoboro/Ntenkyem</i>	Measles	134	N + S
<i>Ayamtu</i>	Diarrhoea	21	N + S
<i>Konkuruwa</i>	Dysentery	15	N
<i>Nkonkon</i>	Whooping cough	50	N + S
<i>Samanwa</i>	Tuberculosis	26	S
<i>Anifura</i>	Blindness	9	N + S
<i>Abodam</i>	Insanity	3	S
<i>Esoo</i>	Convulsion	81	S
<i>Kooko</i>	Pile	57	N
<i>Okwaha/Atutu</i>	Rheumatism	87	N + S
<i>Gyepim</i>	Elephantiasis of the leg	4	N + S
<i>Anisobiri</i>	Dizziness	19	N + S
<i>Adinam</i>	Tape Worm	6	N
<i>Nokoboa</i>	Hookworm	9	N
<i>Mfa</i>	Guinea Worm	5	N
<i>Tipae</i>	Headache	204	N + S
<i>Pompo</i>	Ordinary boil	69	N + S
<i>Nantwi Pompo</i>	Bad boil/carbuncle	9	S
<i>Otwa</i>	Epilepsy	7	S
<i>Ayamkeka</i>	Stomach ache	192	N + S
<i>Ahwempon</i>	Nose bleeding	5	N + S
<i>Abofono</i>	Nausea	4	N
<i>Nsanini</i>	Pimples	11	N
<i>Mpafe</i>	Pneumonia	7	S
<i>Adese</i>	Toothache	5	N
<i>Asosi</i>	Deafness	3	N + S
<i>Sisiyadeg</i>	Waist pains	41	N + S
<i>Papun</i>	Catarrh/cold	5	N
<i>Kaka</i>	Whitlow	3	N + S
<i>Teetee/Ntehyewa</i>	Asthma	4	S
<i>Nkoe/Paka</i>	Hernia	3	N + S
<i>Gyato/Dube</i>	Yaws	4	N
<i>Afun</i>	Humpback	1	N + S
<i>Kokoram</i>	Tertiary yaws	2	S
<i>Bafan</i>	Rickets	2	S
<i>Kwashiorkor</i>	Kwashiorkor	17	N
<i>Apakye</i>	Lameness	3	N + S
<i>Asinsin</i>	Paralysis	1	S
<i>Ahonhono</i>	Edema	2	S
<i>Afaho</i>	Menstrual disorder	1	N + S
<i>Asikyire Yadeg</i>	Diabetes	3	N
<i>Dwonsoyayaa</i>	Bilharzia	7	N + S
<i>Ehoa</i>	Dandruff	12	N
<i>Kompo</i>	Goiter	2	N + S
<i>Ete</i>	Cataract	2	N + S
<i>Brompete</i>	Chicken pox	9	N
<i>Mpete</i>	Small pox	15	N
<i>Atonkomada</i>	Sleeping sickness	4	N
<i>Etwo</i>	Elephantiasis of the scrotum	4	S
<i>Deepua</i>	Vaginal disorder	5	N + S
<i>Babaso</i>	Gonorrhoea	5	N + S
<i>Samee</i>	Groin boil	9	N + S
<i>Nkantemasi</i>	Jiggers	5	N
<i>Hwempu</i>	Gondu	1	S
<i>Bonini</i>	Barrenness	3	N + S
<i>Apollo</i>	Eye disease	10	N
<i>Ahotutuo</i>	General bodily pains	17	N + S
<i>Nsaa</i>	Rashes	37	N
<i>Kwata</i>	Leprosy	5	S

* N = caused by Natural Agents; S = caused by Supernatural Agents; N + S = could be caused by both Natural and Supernatural Agents.

METHODS USED IN INDUCED ABORTION IN BANGLADESH: AN ANTHROPOLOGICAL PERSPECTIVE

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Abstract—This paper describes the modern and traditional methods and techniques used in induced abortion in Bangladesh, and the physiological problems faced by the abortion seekers. It observes that social prestige and economic security are the main issues associated with induced abortion. This paper also discusses the opinions people gave for and against induced abortion, and argues for partial liberalization of abortion laws in Bangladesh due to the failure of contraceptives.

INTRODUCTION

In Bangladesh, early pregnancies may be terminated legally in order to save the life of the mother. If pregnancy is terminated for any other reason, the one who carries out the abortion and the woman who seeks it are liable to prosecution.

Induced abortion is considered a sin by both Hindu and Muslim communities in Bangladesh. If this sin is discovered, prescribed punishments are given, especially to un-married girls and widowed women along with their male partners. The punishments are somewhat different in the Hindu and Muslim social systems. It is interesting to note that there is not any prescribed punishment for a married couple that induce an abortion though it is still considered sin [1].

In the modern world a number of countries have liberalized abortion laws on moral, medical, social, economic, legal and humanitarian grounds. A few countries in Asia, like Japan, China and India have liberalized abortion laws as one of the methods of birth control, especially in the case of failure of contraceptives.

Induced abortion in Bangladesh is well known but not well-documented. As far as the author's knowledge goes, the only previous empirical studies of induced abortion in Bangladesh are by Bhuiyan *et al.* [2] Burhanuddin [3] Chaudhury [4], Rosenberg *et al.* [5] and Maloney *et al.* [1]. Many scholars have done research on induced abortion in countries other than Bangladesh. Unfortunately the author has had access to only a few books and research articles [6–15].

Rosenberg *et al.*, [5] have given some information about the practice of induced abortion and estimated the incidence of death from induced abortion in Bangladesh. Maloney *et al.* [1] in *Beliefs and Fertility in Bangladesh* have collected opinions regarding induced abortion and discussed its informal practice through traditional methods. Pillai *et al.* [6] and Poffen Berger [7] has mentioned the allopathic, homeopathic and ayurvedic methods used in induced abortion. Mankekar's [8] study describes the modern allopathic and folk methods used in induced abortion. Shapiro [9] discusses the folk methods used by some tribal peoples to induce abortion. Nager's [10] study

deals with the laws and attitudes affecting the practice of induced abortion. Muramatsu's [11] *Abortion in Japan* describes modern methods used in induced abortion. Chow's [12] research paper attempts to analyse methods of induced abortion and abortionists in Taiwan. Tietze *et al.* [13] have given a description of induced abortion, its incidence and arguments regarding the liberalization of abortion laws. Potts *et al.* [14] mention the logistics of abortion services and the role of abortion in family planning programmes. Bhuiyan *et al.* [2] have mentioned 640 abortion cases were admitted in the Medical College Hospital and out of which 90% were married, 5% unmarried and the rest of widowed, divorced or separated. Burhanuddin [3] discusses that the family Planning program should adopt abortion as a supplement to its conceptual control services and begin to induce to have only two children. Chaudhury [4] mentions about 56% elites showed their attitude in favour of legalization abortion as a means of birth control and most of them have urban background. Liskin's [15] research paper attempts to analyse the complication stemming from illegal abortion constitutes a major health hazards in connection with the hemorrhage, infection and shock for the women.

This article will give a clear picture of both traditional and modern methods and techniques used in induced abortion, its causes and problems, local opinions for and against induced abortion as well as some arguments for the partial liberalization of abortion laws in Bangladesh.

METHODS OF THE STUDY

This paper is based on data taken from the study: *World View and Belief Systems in Relation to Population in Bangladesh*. The project was conducted by the Institute of Bangladesh Studies, University of Rajshahi in 1977–79 and incorporated with 17 areas of 12 districts in Bangladesh. The data has been taken for this paper from four areas: two rural areas of Rajshahi and Rangpur districts and two urban areas of Rajshahi and Dacca districts. Four investigators (two males and two females) collected information through questionnaire and observation methods. Information

from questionnaires was supplemented by in-depth interviews with key informants. The investigators made attempt to establish a friendly relationship with the informants in order to get valuable information on this personal subject.

METHODS OF INDUCED ABORTION

Two categories of induced abortion are: (1) modern methods used by qualified medical practitioner and (2) traditional methods used by the un-licensed abortionists or by the abortion seekers themselves. Again the modern methods are divided into two categories: suction and dilation and curettage (D & C).

Modern methods

MR (menstruation regulation) services have been introduced recently in a number of clinics operated by both public and private agencies, mainly in urban areas. Informally, this is a deliberate attempt to provide for termination of unwanted pregnancy. The termination is possible if the women go to the centre within 6 weeks of conception. After the first 6 weeks abortion is formally illegal, and the doctors are not willing to do it in the centre. Some of the practitioners, of course, accept cases personally and terminate the pregnancy in their private clinics for high fees. These facilities are not available throughout Bangladesh.

Indigenous and traditional methods

Indigenous and traditional methods are also divisible into different categories: allopathic, practiced by quacks, un-skilled nurses, untrained midwives, compounders and the abortion seekers themselves; homeopathic, practiced by the homeopath practitioners; and Ayurvedic, practiced by the *Kaviraj* (ayurvedic doctor), *fakirs* (folk-physician), midwives, priests, etc. In addition there are other folk methods for inducing abortion practiced by the abortion seekers themselves with the help of persons experience in that line. The process of data collection on the subject and the reliability are presented in the discussion on the methods of the study. It should be noted that 76 practitioners were interviewed on indigenous and traditional methods. Among the 76, 24 unlicensed allopathic practitioners, 8 homeopathic, 17 ayurvedic and 15 folk methods practitioners. In addition there were only 8 qualified medical practitioners who were interviewed for modern methods.

ALLOPATHIC METHODS OF QUACK PRACTITIONERS

One allopathic method uses hypertonic saline and glucose injections. Another method involves application of latex paste to the cervix, allowing it to remain for a period of 6 hours followed by an injection of clinisterol [6, pp 11-12]. Untrained midwives, quacks and compounders also employ quinine tablets, high potency pergatives ergot, dengenine tablets or injections, bora potassium permanganate, etc. Strong purgatives are generally used by the abortion seekers themselves for induced abortion in Bangladesh. In Bangladesh the abortion seeking women deliberately take large quantities of birth control pills at a time

to induce bleeding for abortion. Sometimes the quacks also inject soap solution into the uterus. At the time taking of information the investigators observed a few cases as reported by them and in addition at the time of supervision I observed a few cases in the D & C section of a medical clinic.

HOMEOPATH METHODS

The homopathic methods are generally practiced by the homeopath doctors, compounders and the abortion seekers themselves with the help of the homeopathic literature. Generally the homeopathic physicians, if willing to participate, prescribe *Gasipium fort*, *Colophylum* and *Palsettella* injections for the purpose of inducing abortion. It is also reported by the homeopathic practitioners that they use *Palcettilla* 30-200 Gm or *Ciciliquer*. It should be noted that if the conception is matured, they would use an overdose of any of the above. It should be further mentioned that these medicine may not work if the case is matured.

AYURVEDIC METHODS

The ayurvedic methods are practiced by the *Kaviraj*, un-trained midwives, *fakirs*, priests etc. Generally the rural people and the poorer section of urban dwellers apply this method. The ayurvedic medicine is prepared from native plants. Juice, dust and paste are prepared from roots, barks, leaves, branches, flowers, fruits and seeds. This method most of the cases work effectively as reported by the key informants. According to informants, they are utilized as indicated in Table 1.

The abortionists also prescribe terpin oil and shaving oil or its leaf to put in the womb.

Sometimes roots and twigs of powerful plants are tied or applied to the waist or arms of abortion seekers. For example the root of a tender plant must be pulled from the ground within the span of a single breath and attached to the body with a piece of thread from an old rag. Twigs of *shetendā* are also tied to the waist.

FOLK METHODS

Folk methods of inducing abortion takes the form of violent physical strain or stress; jumping from high places and jumping with legs tied, rigidly together on plain land are also practiced to induce abortion in Bangladesh. (This type of technique is also found among the Melanesians [9, p. 186]. Running over high and low places constantly, lifting and carrying excessive loads, going up and down stairs repeatedly, and fasting are other methods. Women may carry a big jar full of water from the pond or river to perform their household work for hours together as a deliberate attempt to terminate an un-wanted pregnancy. The *dheki* (husking machine) may also be pedalled for hours at a stretch to induce abortion because the process of husking creates physical strain. The abortion seekers also believe that hot spices, taken in large quantity causes bleeding and abortion. They may also alternate drinking extreme hot and cold water in rapid succession.

Table 1. Ayurvedic methods

Bengali	English	Scientific name	Method
Mendi	Indian privet	<i>Lawsonia alba</i> Lank. F. Lythraceae	Drink the juice of the leaf
Dhaturā	Thorwapple	<i>Datura Stramonium</i> L. S. Solanaceae	Drink the juice of the leaf
Ānāras	Pineapple	<i>Ananas Comosus</i> L. F. Merril Bromeliaceae	Drink the juice of green pineapple
Māthār	—	<i>Erythriwa</i> , India Lank F. Papilionaceae	Swallow the milk like sap
Kārpās	Cotton	<i>Gossypium herbaceum</i> L. F. Malvaceae	Eat the seeds
Pepe	Papaya	<i>Carica Papay</i> L. F. caricaceae	Drink the astringent juice
Karabi	Oleander	<i>Nerium indicum</i> Mill F. Apocynaceae	Eat the paste of the root

REASONS OF INDUCED ABORTION

Though induced abortion is illegal in Bangladesh socio-economic pressures, or health and family reasons often compel people to seek induced abortion. Strictly most of the people are against induced abortion, but sometimes they consider that their situation forces it upon them.

Those who are very conscious of their socio-economic conditions desire to control the number of their children for economic security. This desire is less strong among rural people than in urban areas [4, pp 479-494]. Health conditions also compel people to induce abortion; this is actually permitted by law. A fairly large number of abortions in Bangladesh are sought by single or unwed women (unmarried girls and widows) wishing to avoid illegitimate birth for the sake of personal as well as family prestige. Lastly, the failure of modern contraceptives is a frequent reason for induced abortion in Bangladesh. This is happening because of the ignorance of contraceptive users, which is in turn due to the lack of proper instruction and follow up by family planning workers. It is very difficult to give quantitative information about the number of cases of induced abortion associated with each of the different reasons, because it is a very sensitive subject.

POST-ABORTION PROBLEMS

Physiological problems are usually faced by the abortion seeker after the termination of her pregnancy. It is rather difficult to give a realistic estimate of the incidence of abortion and its associated side effects because of inadequacy of reporting, more so in the case of induced abortion. The following information about the nature of such problems has been taken from interviews with medical (allopathic) doctors, homeopathic doctors, nurses, compounders, quacks, midwives, *Kavirāj* and priests. None of these practitioners like to disclose the nature of post-abortion problems because abortion is quite illegal and secret. Moreover if they disclose the facts that exist, they may not have patients.

Strong purgatives used by the abortion seekers themselves and prescribed by quacks may often cripple the patient's health for the rest of her life. The application of latex paste to the cervix involves risk of infection, haemorrhage and pulmonary embolism [8, pp 42-43]. In rural Bangladesh sometimes the quacks give injections of soap water. This can bring collapse and death within a few minutes (Dr A. K. Paul, personal communication).

The fold methods which take the form of violent physical strain or stress may create neurological dis-

Table 2. Some plants are also inserted into the vagina

Bengali	English	Scientific name	Method
Chāmpā	—	<i>Michelia Champaca</i> L. P. Magholiaceae	Insert the root
Setenda Hātisūr	Heliotrope	<i>Heliotropium Indicum</i> L. F. Boraginaceae	Insert the root
Lālchitrā	—	<i>Phembago rosea</i> L. F. Rhembagiaceae	Insert the root
Kārpās	Cotton	<i>Gossypium herbaceum</i> L. F. Malvaceae	Insert the root

orders. In addition, it is believed that induced abortion may lead to neurotic or even psychotic symptoms [13, p. 9].

OPINIONS IN FAVOUR OF INDUCED ABORTION

About 44% village professionals thought abortion should be made legal [1, p. 244]. Those who favored legalization tended to be educated and had urban backgrounds or schooling. Among these professionals were social and family planning workers, doctors and some of the village leaders. The following opinion was given by a Muslim school teacher.

Abortion should be legalized for those who want to limit their family size. We teachers make only 500 (U.S. \$25) Takā a month from the schools, and we can not live on that; and we have to give tuition or do field labor, and we will not have anything to leave behind for our children. Though a number of couples want abortions, there are no dependable institutions or means in these rural areas.

A *Purohit* (priest) respondent said:

In the past there was no necessity of induced abortion because land and goods were more abundant; otherwise abortion should have been approved as part of religion long ago, and proclaimed legitimate. Murder is sin, but abortion will not be considered murder if it is done within two or three months because the embryo does not assume human shape in this period. It is a greater sin than abortion if parents fail to manage food and shelter for their children. In view of this legalization of abortion is necessary in the present situation (Not all priests share this view.)

From the two quotations it is clear that a section of people are in favor of induced abortion to limit their family size as well as to get rid of economic hardship to establish a happy family life.

OPINIONS AGAINST INDUCED ABORTION

About 56% village professionals thought abortion should not be legalized [1]. Most of them are religious functionaries. Their moral objections are based primarily on the contention that human life begins with the union of the egg and the sperm, so that destruction of a fertilized ovum is an act of homicide. Opponents of abortion in all categories of medical practitioner as well as lay people and religious specialists, hold that it opens the door to the brutalization of society [13, p. 3]. To quote a *Moulovi* (Muslim religious leader):

God will curse the earth with death and destruction, and human miseries will have no bounds if the sin of abortion is made legal. This would be interference in God's affairs.

An allopathic doctor:

If abortion is legal and available, sexual intercourse will increase, and as a result general chaos will accelerate, and indiscipline will be even greater.

So, it appears that more than 56% of those interviewed are against the legalization of abortion laws. Thus there is strong feeling both in favor of and against the legalization of abortion in Bangladesh.

CONCLUSION

In conclusion it can be mentioned that the inducing of abortion was made illegal under the Bengal penal Code (1860) though permitted if the life of the mother is threatened. Today in Bangladesh this code continues to exist without any change or modification, but different preventive measures are already being taken for population control. Moreover in Bangladesh the majority of people are Muslims and Islam regards induced abortion as a great sin. Nonetheless, informally people are compelled to induce abortion for the sake of prestige to avoid illegitimate pregnancy. In this situation people forget their religious code and morality.

On the other hand, most cases of induced abortion are practiced by unskilled abortionists and lead to an increase in female mortality. According to a research report by ISRT (Institute of Statistical Research and Training) at Dacca, 10,000 Bangladeshi women die each year as a result of complications from induced abortion [5, p. 6].

Some people both in rural and urban areas of Bangladesh, especially those who are on fixed incomes, are in favor of legalization of abortion. According to their opinions, induced abortion is not a sin if it is done before the formation of the infant; it is not comparable to infanticide then. They say abortion should be legalized for those who want to limit their family size.

Some of the informants say that if abortion is legalized, illegal coitus will increase and as a result general social chaos will accelerate. The author does not support their opinion fully. It seems to him that if people are starving, gradually they will become unruly posing as much of threat to the social order as many think abortion would pose.

In 1972 the Indian Government passed the Medical Termination of Pregnancy Act. This act was passed essentially on health grounds and permits termination of pregnancy for eugenic, humanitarian and socio-economic grounds and for contraceptive failure. The author would argue in this regard that the government of Bangladesh might think about the legalization of abortion for married couples who wish to terminate pregnancy because of failure of contraceptives. (The couple would have to show their authentic marriage certificate before the termination of pregnancy.) There is already a lack of socio-religious sanction against induced abortion by married couples as opposed to abortion is introduced in every health clinic both in urban and rural areas in Bangladesh, it will be an additional effective measure of birth control; consequently the rate of population growth will be reduced.

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DIAGNOSIS AND CURE: THE RESORT TO TRADITIONAL AND MODERN MEDICAL PRACTITIONERS IN THE NORTH SOLOMONS, PAPUA NEW GUINEA

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Abstract—Analysis is made of medical beliefs and practices in two Melanesian societies, both on Bougainville island. Sorcery and supernatural sanctions remain important as causes of illness and hence forms of social control in the absence of superordinate political authority. Distinctions between symptoms and illness are often ambiguous and throughout Melanesia this provides some flexibility in classification, diagnosis and cure. Among both groups described in this paper, most illnesses are described as either 'illness without cause', which is rarely serious and never attributed to sorcery or the actions of spirits, or 'illness of the settlement' which is more serious. Some serious illnesses which respond to modern medicine may now be classified as 'illness without cause'. 'Illness of the settlement' may be caused by sorcery or spirits, which may follow breaches of social norms. Attributions to sorcery are of growing significance, especially in Siwai which is more firmly incorporated into a wider society and economy. There are a variety of traditional medical practitioners with both physical and spiritual skills and 'traditional' cures are constantly changing. Since the war, European medicine and practitioners have supplemented traditional practitioners to produce, especially in Siwai, a dual hierarchy of alternatives. This modern system has only slightly affected local beliefs about illness. Because modern medical practices are viewed by both groups as means for treating symptoms, the two systems enable a flexibility and diversity of response, encouraging complementarity rather than competitiveness.

INTRODUCTION

Lieban has noted that "modern health and medical practices have been among the most important changes introduced" [1, pp. 1055-6] throughout the world. Modern medicine has become well established in many areas where traditional medical practices persist. Rather than replace traditional practices, modern techniques have increased the medical options available [1, p. 1056]. In Melanesian societies where sorcery and/or supernatural sanctions are forms of social control, what are the implications of social and cultural change for concepts of illness, diagnosis and curing? How do people adjust their medical beliefs and practices to accommodate new ideas? Have Western medical practices been incorporated with more traditional medical beliefs and practices into an operating medical system? These questions can be examined in relation to two groups of Bougainville islanders: the Eivo and Simeku speakers of Atamo in Central Bougainville and the Siwai of South Bougainville (now the North Solomons Province of Papua New Guinea).

As with the Gnau of West Sepik, Papua New Guinea, both societies lack "a medical system in that there is no special department of co-ordinated knowledge and practice concerned with the understanding and treatment of illness" [2, p. 245]: activities concerned with illness are integrated into other spheres of activity and the primary and central focus of the ideas and practices is not sickness, each of which rather define a Western medical system. Nevertheless, we have preferred to maintain the distinction, albeit unsatisfactory, in the present paper.

The comparison of Atamo and Siwai beliefs about and reactions to illness presented in this paper reveal strong similarities between the traditional categories of illness, aetiologies and cures of the two groups. Despite differences in language and exposure to Western medical practices, environmental setting, and political organization, differences in the two indigenous medical systems are more a matter of emphasis than significant variation. Moreover, the way in which the two groups have incorporated Western medical beliefs and practices into their systems suggests that if symptom and cause of illness are considered separate but related phenomena as they are by Atamos and Siwai, traditional systems can be maintained despite the use of alien cures and the introduction of alien beliefs.

The economy and social organizations of both Atamo and Siwai have been examined in detail elsewhere [3-7] and a further commentary [8] enables general comparisons to be made of the extent of western influence in different parts of Bougainville. Both areas share a matrilineal descent ideology and there is an overall similarity of social structure between them. Both the Atamo and Siwai worlds are said to be inhabited by a great number of spirits of various types, including land spirits and ghosts, who may cause illness when individuals are angry or fail to fulfill their social and ritual obligations. Almost all Atamos and Siwais are baptised and many are practicing Christians. Spirit beings do not form a unitary system and Bougainvilleans do not have a sure and clear understanding of the intentions and means of their spirits.

While leaders in both Atamo and Siwai, were and



Fig. 1

still are 'big-men', who attain their positions through competitive feasting and exchange, there are some differences in political organization between the two areas. Achieved leadership is less developed in Atamo than in Siwai. Among the Siwai where the population density is greater, villages are larger and competition between leaders and potential leaders is more intense, hence Siwai leaders have tended to achieve both greater power and respect.

The languages and linguistic situations of Atamo and Siwai are quite different. The Atamo population is made up of speakers of two language groups: Eivo speakers and Simeku speakers. Eivo and Simeku share approximately 17% cognates and the grammars of the two languages are quite distinct [1]. Simeku is a sub-language of Nasioi which is of the same language stock as Siwai [3, pp. 31-34 2]. Nasioi and Siwai share about 27% cognates [6]. Eivo, which is of the northern stock of Bougainville's non-Austronesian languages, share 9% cognates with Nasioi. Despite the presence of two language groups in Atamo, the village and its hamlets can be considered a distinct social group: residents interact more frequently with each other than with language group mates in other village areas [3,5].

European contact in Atamo and Siwai was unimportant until the 1920s although steel tools had been introduced by the end of the nineteenth century; many men from both areas had had experience of

plantation employment and the Australian colonial administration began appointing village officials before the war. After the war, economic change was rapid as cash cropping [cocoa and copra] began in the 1950s and 1960s in Siwai and in the 1960s in Atamo; Local Government Councils were established and in 1975 a Bougainville Provincial Government was established which linked all parts of the island into a single political authority. The establishment of urban centres at Arawa and Panguna, in conjunction with the Panguna copper mine which began production in 1972, resulted in increased accessibility to markets (especially from Siwai) and substantial wage incomes from the mine. As a result, incomes are significantly higher in Siwai than in Atamo.

It has been stated that "the belief that illness is a punishment for wrongdoing is widespread in human society" [1, p. 1049]. Beliefs in sorcery and in the actions of supernaturals against those who breach social norms and moral codes have been reported in many Melanesian societies; in part such forms of social control may be attributed to the lack of other means and especially superordinate political authority [9, pp. 25-6]. The relative importance of sorcery and supernatural sanctions in different Melanesian societies has been attributed to a number of factors; thus in comparing the Enga of the Western Highlands and the South Fore of the Eastern Highlands of Papua New Guinea spirits are a more prevalent explanation

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for illness in Enga where population density is high whilst sorcery is a more frequent explanation where endemic disease and depopulation are problems [10]. Elsewhere in the Highlands it has been suggested that there is an inverse correlation between the importance of sorcery and the importance of warfare [11]. The relative importance of supernatural sanction and sorcery as explanations of illness may be a function of the freedom of individuals to take retaliatory action and this may have both spatial and social components.

ILLNESS

In both areas illnesses are described in terms of severity, symptoms and cause. Distinctions between symptom and illness are often ambiguous and this provides some flexibility in classification, diagnosis and cure as it does elsewhere in Melanesia [12, 13]. Most illnesses are described in Tok Pisin as either *sik nating* (illness without cause) or *sik bilong ples* (illness of the settlement) a dual distinction which is typical not only of Atamo and Siwai but also of other parts of Melanesia [14, p. 91; 15, pp. 483–4]. Decisions on the classification of illnesses are based on both physiological and non-physiological criteria. "Illnesses without cause" tend to have single rather than multiple symptoms and the symptoms are generally specific and observable. 'Pain', 'fever', 'swelling', 'vomiting' and 'coughing' may be considered 'illnesses' or symptoms of 'illness of the settlement'. Swelling is the most generally reported symptom of sorcery but it can also be caused by spirits as punishment for a transgression. Internal pain is said to be caused by 'spirits' which may be punishing an individual or which may be acting as agents for a sorcerer.

The classification of cases of illness as either 'illness without cause' or 'illness of the settlement' can also be affected by such factors as the number of cases of a particular illness in the community at the time it is contracted by a victim; the status of the individual afflicted or the head of his or her household; the age of the victim; and whether there is reason to believe the victim or a close kinsman or affine has committed a breach of a social norm or angered a rival. 'Illness of the settlement' is said usually to be directed at a single individual, kin group or residential group. An epidemic, which afflicts no specific group would, therefore, be considered 'illness without cause'. Adult males are considered to be the most likely to experience illnesses caused by sorcery and spirits. This is simply because they are more active in ritual and competition for 'renown' and thus more likely to offend spirits and other competitors. Infants, the aged and to some extent women, are more likely to become ill for no reason. Illnesses 'without cause' are rarely serious and are never attributed to sorcery or the actions of spirits.

Prior to European contact, as today, there were some illnesses which were believed not to have resulted from the independent actions of spirits or from sorcery. However, few illnesses and no serious ones were considered to be without cause. Informants claim 'head cold', 'headache' and 'insatiability' have always been considered seasonal ailments associated with particular seasonal crops. The most distinctive

seasonal crop is the canarium almond (*Canarium* spp.) which fruits for about three months around the end of the year. Head and chest colds are said to be prevalent at the time flowers and new fruit of mangoes, breadfruit and canarium almonds appear. 'Headaches' appear with breadfruit and, in Atamo (but not in Siwai), 'insatiability' appears when wild sugar cane is reaching maturity and when new bamboo shoots appear. Insatiability, it is claimed, is an affliction which makes an individual unable to satisfy his or her hunger no matter how much food is consumed. It is not a debilitating condition but makes one always hungry, listless and uncomfortable. In Atamo especially, residents complained of 'head cold', 'headache' and 'insatiability' and consistently noted their associations with stages in their respective plant seasons. Illnesses such as these and other non-debilitating, short-lived afflictions were usually considered to be without 'significant cause'.

There are several illnesses which are currently considered serious but may also be designated 'illness without cause'. With all such afflictions, Tok Pisin (neo-Melanesian) terms are used almost interchangeably with indigenous names. Two Tok Pisin terms, *tibi* ('T.B.') or *sotwin* ('shortness of breath') are used to describe respiratory ailments including tuberculosis. These may simply appear without significant cause or may result from sorcery or supernatural sanction. Siwais believe that before European contact there were no real cases of tuberculosis, only lesser illnesses involving coughs and shortness of breath. Serious tuberculosis, they say, followed contact.

Dysentery is described in all languages as 'defecating blood'. It may be serious and afflict many individuals. Atamo informants claim this illness struck settlements prior to European contact; this was then attributed to either sorcery or supernatural sanction. Siwai informants who were settled in line villages a few years earlier than Atamos are more willing to state that dysentery only followed the establishment of these larger nucleated settlements. This is also the belief of older residents of southern Guadalcanal in the central Solomons [16, p. 100]. In both parts of Bougainville, dysentery in 'line villages' prior to and following the war reportedly resulted in the abandonment of villages but informants did not relate its occurrence to sorcery or punishment for wrongdoing.

'Malaria' has become a Tok Pisin term which is applied to practically all fevers and chills. There are indigenous terms for both fever and chills as well as several serious illnesses for which fever and/or chills are symptoms. Nevertheless 'malaria' is in general usage and informants claim it can be cured with quinine. Malaria eradication started around 1960 [17, pp. 51–52] and may account for Eivo and Siwai beliefs about malaria.

Although there may have been illnesses for which no significant cause was posited prior to European contact, they were apparently few in number and not serious. This may not have been true in other areas of Melanesia; Lewis notes that the Gnaus had a number of illnesses which were attributed to 'natural causes' and that in the case of at least one illness it was often serious [2, pp. 196–201]. Nevertheless, in Bougainville classifying 'serious illnesses' as 'without cause' has probably resulted both from exposure to Western

concepts of medicine and Western cures and from the broader social interaction in which Bougainvilleans find themselves today.

In addition to the afflictions mentioned above, there are also common ailments [18, p. 35] such as *tinea*, insect bites, burns and most accidental wounds which are not regarded as illnesses. Both Atamos and Siwais use both local and Western medicines to treat such ailments and do not consider them as serious since recovery generally requires only brief treatment and patience.

Among Atamos and Siwais 'illness of the settlement' indicates that the cause of illness is either sorcery or action taken by supernaturals. In most cases, spirit-caused illnesses among both groups are said to result from the breach of a norm or from 'anger' which has offended one or more spirits. Sorcery, on the other hand, is the work of a living individual motivated by jealousy or anger. Although spirits are said to be involved in sorcery, informants from both areas were not always clear as to how they were involved. In Siwai, it is believed that no sorcerer can use poison effectively without the assistance of spirits; poisonous material alone was quite unlikely to cause illness or injury.

Illnesses caused by sorcery or spirits may be viewed by the community and/or the victim as justifiable punishment or retaliation. Once an illness has been judged serious, the victim and his close kinsmen and affines try and think what the victim may have done to bring about the illness. Unless symptoms indicate otherwise, most serious illnesses are assumed to be the result of a wrong of some kind or sorcery. In all but two of 21 cases of serious illness which occurred in Atamo (in 1974-76) supernatural sanction for wrongs, anger or the loneliness of 'ghosts' were the publically accepted and acted upon causes; in only one case was the final diagnosis sorcery. Atamos say they believe in sorcery and so attribute at least some illnesses and past deaths to it. However, unlike Siwais, Atamos do not publically make sorcery accusations nor do they act upon most serious illnesses as if they were caused by sorcery. In two villages in Siwai (1975-76) sorcery was the final diagnosis in as many as four out of 12 cases of serious illness.

There is no general term for spirit sickness. Each language group talks about illness resulting from the actions of supernaturals in a number of ways: "a spirit is making me ill"; "my (dead) grandfather is killing me"; and "my soul has been harmed by another" are Atamo examples. 'Spirits' are said to cause illness when: individuals violate social norms or neglect social or ritual obligations; individuals are angry with a close kinsman or affine; individuals experience extreme sorrow over the loss of a kinsman or affine; 'ghosts' of recently dead ancestors are 'lonely' for living individuals; and 'bush spirits' attack an individual for no good reason. When an individual is believed 'seriously ill', the victim and his or her kinsmen begin to ask what the victim might have done wrong which resulted in the illness. In most cases, both in Atamo and Siwai, a breach of a social norm or the neglect of a ritual obligation is considered the probable explanation for the illness.

Some of the most serious illnesses of all, in Siwai and in Atamo, are believed to follow breaches of

specific social norms. Both groups have exceptionally strong taboos against a man's contact with his wife's mother (and classificatory mothers). Thus in Atamo leprosy or yaws is said to be caused by a man coming into contact with the sleeping platform, mat or clothing of his wife's mother. The seriousness of a disease is closely correlated with the gravity of the social norm that has been breached.

A previous paper [19] examined the relationship between the relative importance of sorcery and spirit sickness as explanations of illness in Atamo and Siwai since attributions of sorcery were more frequent in Siwai. It concluded that this is in part related to the nature of traditional leadership, since Siwai leaders were both more powerful than those in Atamo and were usually believed to have the ability to perform sorcery. Secondly, the paper concluded that because Siwai villages had become much more firmly incorporated into a wider socio-economic-political system than Atamo so that accusations of sorcery, which throughout Melanesia are rarely made within small communities, may be more readily directed at more distant individuals. In Siwai where population density is greater, intervillage communications much easier and economic inequality greater, the opportunities for sorcery are enhanced. Physical space, and its changing significance, is crucial to social relations.

DIAGNOSIS AND CURE

Diagnosis has been described to some extent above. It may involve the use of social conditions and supernatural signs as well as physiological symptoms. Bougainvilleans begin to look for causes of an illness at its onset and the process of diagnosis continues for the duration of the illness. Each set of symptoms of a single disease may be recognised as a discrete sickness which therefore necessitates a separate diagnosis and medical intervention at each occurrence. If the illness persists the number of individuals concerned about it may increase and the problem of finding a cause will be considered by this larger group. Opinions on the cause of an illness may vary among the kin of the victim and throughout the community. Individuals may know of different incidents in which the victim acted inappropriately, violated a norm, became angry or caused a rival to become jealous or angry. Illnesses may also be used politically to exert pressure on victims to make amends for past wrongs. Accusations against a victim or another are rarely made directly but neutral kinsmen of the parties involved bring the victim and person wronged or perpetrator of a wrong together to settle their differences. Those who know 'good magic' and 'diviners', especially those who are members of a victim's community, are in a position to know a range of possible causes and may act as social healers. If the illness continues, no significant cause has been discovered or a cure has proved ineffective, other specialists from further afield may be consulted. In Atamo, specific curers gain a reputation for having 'good magic' which is effective against particular illness. However, it is a matter of trial and error until one finds a treatment which is 'strong enough' to combat one's affliction. In Siwai, on the other hand, there is something of a hierarchy of specialists, a hierarchy which is both more obvious and more consist-

ently used, where problems of intervillage communication are much reduced. However consulting distant specialists is a risky business; they are less likely to be sympathetic to a cure, they may on occasion be more closely involved in the cause and the payment they demand will certainly be greater. The relationship between patient and curer influences the size of payment and satisfactory payment is an integral part of the therapy.

'Divination' and 'good magic' derive their efficacy from supernaturals. 'Good magic' includes techniques for curing illness, protecting children and adults against illness and sorcery, ensuring the success of feasts and hunting expeditions, making pigs fat and healthy and enabling individuals to find a suitable spouse. Various forms of good magic are administered in conjunction with rites of passage, both in Atamo and Siwai [4]. Knowledge of various 'good magic' techniques may be acquired through inheritance, gift, purchase or experimentation. The 'strength' of a particular technique depends on the strength of its 'spirit', and the control that the practitioner has over that spirit. Not all forms of 'good magic' are named, but those that are bear either the name of the spirits associated with them or are described in terms of their desired results [4, 20]. In Atamo, plant materials, lime, earth from certain areas, bamboo water and 'spirit faeces', an organic substance found in caves, are used in performing 'good magic'. Sweet smelling plants, wild ginger and betel nut mixtures are commonly used in 'good magic' directed against illness. In Siwai, knowledge of the components of 'good magic' is more zealously guarded in the belief that efficacy depends partly on secrecy; however, the more commonly used components are similar to those in Atamo.

All illnesses are believed to have cures although these will not always be successful; consequently there were no observed or known instances where local curers refused to treat cases even where their prognosis was particularly unfavourable [21, p. 8]. There were always adequate explanations for unsuccessful treatment. Specific remedies are known for ailments such as diarrhoea, headaches, sores and broken bones. These remedies vary in their composition and certain individuals are known to possess particularly potent remedies for these specific afflictions. Bone menders, who are specialists only found in Siwai, are a distinct group.

Especially strong magic is said to be necessary to cure sorcery or spirit-caused illnesses. Strong magic usually involves the use of coconut oil, plant or sometimes other materials in which the spirits reside. These materials are then used in conjunction with wild ginger and/or betel mixture. Although the form of the cure may be the same, curers are known to be specialists in various ailments. This is said to be the case because specific spirits are said to be 'strong' in combatting the causes of specific ailments. Various cures and curers may be tried in the course of an illness until the illness is overcome. Curers are more common than diviners and the art is not considered to be so difficult and hence not so specialized.

Divining is a specialist task and although some of the skills can be transmitted for a fee the necessary ability to develop rapport with the spirits is con-

sidered not to be transmissible. The less specialized techniques of curing can be purchased and the skill is transmitted rather than taught. The qualifications are variable and relatively unimportant. Spiritual assistance is necessary for curing serious illnesses but the absence of a special relationship between the curer and a spirit does not preclude successful practice. It does preclude divination and the most successful curers do have this assistance. The rest are invariably specialists within a particular limited field. Scarcely surprisingly, the most successful local medical practitioners tend to be older people. In Siwai they also tend to be men although there are several women specialists; women are especially involved in growth magic, fertility, contraception and abortion. Men usually disclaim knowledge of these last three kinds of practice. In Atamo, both men and women are curers and diviners; at least one pair of curers are man and wife and they work together.

Both in Atamo and Siwai the range and variety of plant materials especially that are used to manufacture medicine is very similar; moreover these are also similar to those used in north Bougainville [22, 23], at least as far west as southern New Britain [24] and east New Britain [25] and as far east as Vella Lavella [26] and south Guadalcanal [27] in the Solomon Islands. This suggests that many of these plants, as empirical evidence demonstrates, are highly effective medicines [28]. It is partly the general co-existence of sorcery and plant cures that occasionally obscures this conclusion.

The plant materials involved in sorcery techniques are naturally even less well-known than those involved in curing. However, on occasion, packets of poisonous material have been collected in Siwai and the plant constituents found to be similar to those involved in 'good magic'. These components too have also changed; on one occasion a chemical analysis was made of poisonous material collected in Siwai which indicated that the material itself, although harmful, was unlikely to be lethal even though it also contained D.D.T. Thus sorcerers in Siwai, as well as in Atamo, are also willing to incorporate materials of proven efficacy in the Western system. Various medical and magical techniques, but not forms of divination, which are somewhat distinct in Atamo and in Siwai [4; 6 pp. 171-2], have been adopted from other areas of Bougainville and both Siwais and Atamos have also discovered new techniques through experimentation. Steam baths have been used in Atamo for body pain and other ailments although none were administered in 1974-76. One informant claimed that this and 'divination' were the only 'traditional' medicines of Eivo and Simeku speakers of Atamo. Others claim steam baths involving hot banana tree skins and other plant materials were adopted from Torau speakers on the coast north of Atamo. Vials of oil used in the curing technique described above have been bought and sold by Atamos from other Eivo and Simeku areas as well as other areas on Bougainville.

'Growth magic' techniques and 'pig magic' have also been 'discovered' by Atamos, and other forms of 'good magic' used to combat illness have been tried and found successful. Materials are chosen if they possess the qualities or attributes desired for the patient. Leaves of trees, which take over bush areas,

are used to cure strong illnesses because the magic will induce the soul of the patient to overcome the illness. Plant materials from spirit shrines are preferred because they are said to have 'power' from the shrine. Smooth leaves are used in treating skin conditions because the smoothness of the leaves will induce the same quality in the skin of the patient. Atamos have used various plant materials in conjunction with rosary beads to cure illnesses and, according to Catholic clergy, villagers have requested holy water which was imbibed to give strength. Both the supernatural element of Christianity and its physical substance have thus been incorporated.

Siwais too have learnt cures and techniques from their neighbours, especially from Buins, whilst some diseases are also believed to have spread from there. Indeed as in other spheres of activity, artifacts and ideas have been transmitted between Melanesian societies for centuries before European contact [29, p. 137; 10]. Following European contact there were a number of dramatic changes in the distribution and incidence of particular kinds of diseases, some of which were new, followed by the introduction and extension of western cures [30] whilst the general advent of peace has enabled specialists to travel more widely or, as in Manus, has enabled patients to travel further to specialists [31, p. 207]. It seems that in Atamo and Siwai at least the innovations recorded here, amongst others, were incorporated into Bougainvillean medical systems without a change in the basic assumptions about the nature and cause of illness.

WESTERN MEDICINE

To some extent both Atamos and Siwais have been exposed to Western medical practices for about half a century. The German administration constructed a hospital in Kieta before 1914 and a small maternity centre was built on the coast at Buin before the second world war. Both of these were distant and used extremely irregularly if at all by Atamos or Siwais. Before the war the two most usual sources of Western medicine were through the visits of administration medical patrols and the occasional ministrations of mission personnel. In Siwai some individuals had been trained at Kieta in the most basic rudiments of Western medicine; none of these could read and so were taught to recognize medicines by their smell. Consequently they learned only the symptoms of those diseases for which a limited number of medicines could be applied and the impact of public health on medical status in Bougainville before the war was minimal.

Since the war, there has been a substantial increase in the availability of Western medicine. A medical aid post was constructed at Atamo and in various Siwai villages during the 1960s so that by 1975 there were five aid posts there; the three mission stations, Manetai in Eivo and Tonu and Monoitu in Siwai, all have maternity hospitals and are sub-health centers with trained nurses in residence. Malaria eradication and anti-yaws campaigns were mounted by the colonial administration in the 1950s and 1960s and immunization against tetanus, whooping cough and tuberculosis has been given by rural health workers. Malaria

patrols are currently maintained whilst clinics are held in all Siwai and Eivo/Simeku villages at intervals no more than one month apart. These are primarily aimed at infant welfare but treat all sick patients who attend. Residential histories, mission records and administration records reveal that Atamos and Siwais have increasingly availed themselves of these medical services. The aid posts were used particularly for the following ailments: tropical ulcers, influenza, and colds, malaria, yaws, tinea, eye infections, diarrhoea, and 'pain'.

At Atamo the aid post was not always open hence when patients felt their illness should be treated by a nurse they went to Manetai for treatment for a similar range of illnesses. In Siwai individuals sometimes preferred to go to the mission health centres rather than the nearest aid post, where the aid personnel had less training. The mission centre at Manetai occasionally referred serious cases to Arawa hospital (opened in 1972) and the centres in Siwai referred these to Moratona, a modern mission hospital in Nagovisi. Complex cases were occasionally referred to Rabaul. For Western medicine therefore there was a rudimentary hierarchy of specialists.

Many of the cases referred to the hospitals were children (often suffering from gastroenteritis) or cases of advanced tuberculosis. A significant proportion of these were terminal cases. Moreover, since doctors often stated their inability to cure some illnesses, whilst nurses often had little knowledge of them, this suggested to many Bougainvilleans that even the best Western medicine was not always as effective as their own medicine. This was especially true since the best curers were always able to disclaim their 'failures' as the failure of the patient to follow their recommendations adequately, either by not observing norms or, in an exact parallel to Western practice, by using medicines incorrectly or failing to revisit the curer. Moreover Western medical practitioners do not discuss aetiology and process with their patients hence, although alternative medical practices and materials are generally available, Western medical cognitive models tend to remain hidden [32]. Ultimately laymen defer to the understanding of curers, local or western, since only the healer is likely to understand the system completely and, even more significantly, esoteric knowledge in some instances may be dangerous to obtain.

The exposure to and use of Western medical treatments and facilities have probably affected some indigenous beliefs about illness. Those people treated at health centres tend to be infants and children who are usually treated for ailments which are said to be 'illness without cause'. Moreover, infants and children are less likely to offend against social norms hence they may also go to health centres for what would, in adults, probably be diagnosed as 'illnesses of the native settlement'.

Bougainvilleans may also use Western medical facilities for 'illnesses of the native settlement' to treat what they see to be symptoms. Western medicines are talked about as if they were forms of 'good magic' and, like new forms of local medicine, will be used if they are seen to work. The failure of European medicine, in almost any context, is almost conclusive proof that the particular illness was caused by spirits or

sorcery [33, p. 537]. A few of those Bougainvilleans who have received secondary education talk about illness and medicine in more Western terms, although not always following Western practice; the majority maintain the view that serious illnesses result from significant social causes.

Illnesses that are 'without cause', especially when they are not serious, are often treated first at the local health centres; these include the more trivial ailments such as cuts, ulcers, colds, and influenza. Alternatively there may be simple, and effective, local cures for these which do not involve the assistance of spirits. In Siroi, a Siwai village 2 kilometres away from two health centres, the only ailments that were invariably treated first at the health centre (if they were treated at all) were cuts and tropical ulcers. For other ailments, individuals would wait for a day or so, during which time a local cure might be tried, to see if the ailment would disappear by itself, thereby requiring no explanation or special treatment. If these illnesses become more serious it is then probable that sorcery or spirits are involved. In these cases, or even apparently more trivial cases in which individuals believe that the illness is not 'without cause', a specialist curer must be consulted. However, at least in Siwai, response to illness may be more pragmatic. Attendance at an administration health centre costs no more than 10 toea (12 cents) and this may result in a cure or, where they are staffed by Siwais, may result in the referral of patients who return or whose symptoms they cannot interpret to a Siwai magician (*mikai*). Conversely, a *mikai* never refers a patient to a government centre and is much more expensive hence, increasingly, individuals are liable to prefer an initial visit to a health centre. This is especially true of illnesses whose origins are uncertain. Measles and smallpox were both introductions that followed European contact hence they have only Western cures. Dysentery and tuberculosis both existed prior to European contact, although Bougainvilleans believe that they were not then so severe as they are now. For tuberculosis especially Western medicine may therefore cure the disease but equally it may be influenced by spirits and not be susceptible to Western medicine. Malaria is also believed to be an introduction following European contact hence Western medicines are able to cure it. It is suggested therefore that the probability of a disease being attributed to spirits or sorcery is also partly a function of the ability of European medicine to cure it.

Most adult Siwais know natural cures for several illnesses 'without cause', including such common illnesses as colds, diarrhoea and headaches and there is no particular skill involved in the treatment of these kinds of sicknesses. Most villages or village groups have a 'general therapist' [6, pp. 302-3] who has a record of successful treatment of a wide range of illnesses and where an illness is considered by the patient and/or his or her relatives to have a specific cause he will be the first person to be consulted. Some of these will be known to have a special ability for curing illnesses that have a particular range of symptoms; a number of individuals may only have this ability. Bonesetters especially may have no ability to diagnose or cure illnesses with more clinical symptoms. The distinctions between the ability and com-

petence of particular individuals are not in practice very sharp. Neither general therapists nor specialists may be successful hence a sick individual has a further local alternative; he can consult one of the leading magicians in Siwai who are both experts at divining and known for their ability to diagnose and practice sorcery. Indeed, as in the past [6, p. 303], lesser healers may refer patients to them. In 1975 there were two such Siwai experts (although one lived at his wife's village in Buin) both of whom were renowned throughout Siwai and often treated patients from as far afield as Choiseul in the western Solomon Islands. They had a reasonable success rate but since their fees were accordingly high they were the last resort of the very ill. The local medical system therefore has a hierarchical structure which, in some respects, both parallels that of the Western system and is a part of that system and there is a flexibility and variety of both diagnosis and cure that may be resorted to for more serious illnesses.

In Atamo, there is no well developed hierarchy of curers and the economics of Western and indigenous cures are quite different. As already indicated, curers in Atamo gain reputations for particular illnesses. However, if a cure for a serious illness administered by a practitioner is ineffective, Atamos conclude that either the cure was not appropriate for that illness, an incorrect cause was attributed for it or the spirit which makes the cure potent was not 'strong enough'. Generally, an attempt to discover the true cause of illness will be made and/or another curer will be brought into the case. Western medical practitioners may also be consulted if local cures are ineffective or at any time in the course of a serious illness. Although the success of a western cure may be acknowledged, Atamos maintain that the true cause of a serious illness (i.e. sorcery or the violation of a norm) must be attended to before Western medicines can be effective. Moreover, because Atamos generally resort to indigenous cures prior to seeking the help of a nurse or doctor, success can be attributed to either or both. Differences in the frequency of use of Western and traditional medicines among Atamos are more a matter of convenience and efficacy than price. Charges for all indigenous cures are modest. Informants claim the cost of most cures is one 'shilling' (ten toea) and this is considered a 'gift' rather than payment. The same charge is asked by Manetai Mission nurses, but they claim people rarely pay. This mission is, however, three hours walk away and treatments often require long stays near the sub-health center where Atamos have a small compound.

The local and Western hierarchies of resort interlock and since both have a spatial and a social structure access may be possible at any point. Individuals do not therefore progress steadily upwards through the hierarchies but ignore particular curers as their social and geographical situations suggest and as their beliefs, intuitions and prejudices determine. The most significant influences to be balanced whilst making these kinds of decision are the fear of sorcery and the cost. Western medicine is invariably cheaper than its local counterpart. Since a number of diseases and disabilities have no final cures (although they may have temporary respites) the resort to two systems is unsurprising; it is necessarily rather more satisfying to

take any medical service than to sit and wait. What is also apparent is that in both systems the diagnosis of the cause of the disease is more definite, if quite different, to local and Western curers, than it is to the patient who is willing to seek out any explanation and subsequent cure.

The flexibility of both Atamo and Siwai medical systems may be further extended across linguistic and geographical boundaries. One author (MPH) was diagnosed as having an illness that was a result of his having offended certain spirits whilst he, his wife and the other author were, on separate occasions, afforded local treatments for particular illnesses. (Each of these outsiders was believed to be potentially susceptible to local disease because of their interest and involvement in local customs, agricultural practices and so on.) For a period of two or three months in the latter half of 1975 a prominent Siwai, usually resident in Rabaul, brought with him to Siwai a specialist curer from the Sepik district, on the northern coast of New Guinea, who he claimed had been responsible for his own and his daughter's recovery from illnesses. During this period, this individual was consulted by several Siwais from widely scattered villages for a variety of diseases. Both in Atamo and Siwai therefore it is possible both for individuals from different linguistic groups to contract the same illnesses and receive the same treatment which, in some cases, even for spirit-caused illnesses, may be administered by specialists from outside the area. Flexibility of response sometimes creates problems. In some cases patients have combined local and western treatments, believing that this will increase the effectiveness of the cure, and in both areas Western medical practitioners have observed serious cases of drug overdoses resulting from this combination.

For most Melanesian societies it seems that physical signs or symptoms of the illnesses give little indication of their causes and hence cure and indeed some societies come close to the Gnau of Sepik who do not depend on their observations of signs or symptoms to discriminate between illnesses [2, p. 141] although most do recognize some symptoms or combinations of symptoms as strongly indicative of a particular cause. Illnesses attributed to sorcery are often those where there are swellings and/or moveable pains, whilst flashing lights in the sky, particular bird cries and thuds of the roof [12], in Siwai at least, further suggest that sorcery is involved. However, the Gnau and apparently all societies, including Atamos and Siwais, also recognize a category of diseases which they attribute to natural causes or, in a different sense, leave them unexplained.

Atamos and Siwais, as elsewhere in Melanesia [29, 31], choose local treatments that they believe will counteract the cause of the illness rather than the observed symptoms. Partly because of the fact that the symptoms themselves do not generally provide a diagnosis to local curers and partly because the introduction of Western medicine offers a different interpretation of the cause of the symptoms Bougainvilleans have responded to the introduction of Western medicine more through a diversity and flexibility of resort to medical systems than through any decline in the resort to local curers.

CONCLUSION

Both in Atamo and Siwai medical systems are flexible and extraordinarily similar, even in linguistic referents. The association between particular illnesses and specific causes is such that most cases of illness could be said to have a number of significant causes. In most cases, an illness could be attributed to either supernatural sanctions or sorcery. Most serious illnesses are attributed to wrongs that have been committed either wittingly or unwittingly and consequently are caused by supernaturals. This was probably so traditionally but may have resulted from social or cultural change.

Bougainvilleans talk about most past deaths and illnesses as having resulted from sorcery. Atamos are, however, unwilling to name practitioners of sorcery which caused deaths or illnesses. Siwais are more willing but, with some exceptions, rarely in a present-day context. It is probable that when the range of social interaction was more limited than it is today, fewer illnesses would have been attributed to sorcery [19]. Both supernatural and social sanctions supported balanced exchange in all aspects of indigenous life, and deaths attributed to sorcery would be likely to result in blood feuds. While fear of sorcery may have acted to encourage amicable social relations and curb behaviour which might cause anger or jealousy, sorcery accusations would have resulted in social unrest.

As Siwai social, economic and political arenas have become wider to a much greater extent than in Atamo and as there has been a diffusion of leadership beyond traditional big-man politics (into modern politics, business and religion) so that social control has also become diffuse and reduced in efficacy, the scope for sorcery and sorcery allegations has similarly broadened. Hence, Siwai leadership is much more diffuse than in Atamo so that although there are individuals with some authority to settle disputes and enforce punishment there are a number of these of roughly equal authority. The diffusion of power that has followed the more rapid incorporation of Siwai into a wider arena has enabled the retention of sorcery as an explanation for illness whereas in a more cohesive and small-scale social, political and economic unit, like Atamo, spirits are more often invoked as the cause of illness. Seemingly paradoxically the decline of traditional leaders and the extension of various kinds of ties beyond village level have emphasized the conservative influence of sorcery and indicated the role of social and physical space in the attribution of illness.

The incorporation of Siwai into a wider sphere of activity has also resulted in greater participation by Siwais in the modern medical system. However, because of the greater experience of Siwais with western medicine, and hence their recognition that western medicine is no panacea, some Siwais are now more willing to retrospectively diagnose sorcery as a cause of illness. As more Bougainvilleans receive a Western style education and gain greater exposure to Western theories of illness, the belief that most serious illnesses result from sorcery or supernatural sanction may change; this change will take place in the midst of other social and cultural changes. Western medicine has been accepted as a useful means of curing

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illness but without changing the basic assumption that most serious illness results from significant causes. This has been possible because Western techniques have been regarded as means of treating symptoms while dealing with causes remains a necessary and sometimes separate step in restoring health.

Amongst Papua New Guineans there is a striking openness to change from sources outside their immediate system [34, p. 227]. This may always have been the case, with contemporary social and cultural changes having been initiated prior to the arrival of Europeans. In the post-contact period this has been especially true of religious movements, whilst changing medical beliefs and practices are a further indication of the flexibility of Melanesian social systems. On the other hand, the two separate medical systems have persisted and co-existed independently, rather than co-operated and coalesced. Three explanations for this persistence have been put forward by Young [21, p. 10]; the most important of these in a Bougainvillean context is that some Western practices are effective but either only against symptoms, and hence complete cures require the elimination of causal agents and only traditional measures can do this, or against a single (and very restricted) category of symptomatically defined sickness (of which, in Bougainville, there are no more than trivial ailments). Thus although both in Siwai and Atamo sick people are likely to be drawn to the Western system for cures of symptoms and to their own systems for cures of the causes, the distinction is far from rigorous; most individuals are extremely flexible in their resort to the two systems although their beliefs may be little changed by their experiences. Similarly although there tends to be resort to Western systems for acute diseases and local systems for chronic disease the distinction is again far from clear; the diversity of potential response, especially in Siwai, enables considerable ambivalence and the choice may depend upon chance [31, p. 203]. What is apparent therefore is that behavioural change proceeds faster than cognitive change; disease aetiology and process are still conceived in traditional cognitive models yet participation in the Western medical system is commonplace.

The other explanations that Young postulated for the persistence and co-existence of two medical systems [21] are less relevant to Bougainville. Firstly, there is a belief that alien medical systems generate true aetiologies but that these can only account for 'new' sicknesses and not for any already incorporated into the traditional system; although this is essentially true of Bougainville, there are few significant post-contact diseases there whilst there is also a recognition that some Western medicine, especially injections, are capable of curing some illnesses (if not influencing the cause). Secondly, in some cultures there is a belief that alien systems generate aetiologies that are empirically true but relevant only to certain categories of people. In Bougainville this belief is essentially absent; Siwais and Atamos both believe, for example, that any group, including Europeans, may be the victims of spirit sickness or sorcery (although it is rather less probable). Although Western medicine has suggested that there is a different set of aetiologies, these are not understood hence through the distinction between symptoms and causes

they are enabled in some circumstances to co-exist, with beliefs in causation and treatment operating simultaneously on two levels.

Despite the effectiveness of Western medical practices in curing some illnesses (or symptoms of illnesses) and the common resort to some Western physico-mechanical procedures, such as surgery and obstetrics, the belief that Western medicine is generally inadequate for resolving causes of illness, alongside the inability of Western medical practices to consistently and clearly effect cures, to make plausible explanations when they are needed and to provide proofs to support these explanations seems to ensure the continued persistence and co-existence of two medical systems for some time. Western medical practices are still proving themselves against strong and sometimes effective traditional cures; as long as the failures remain, that is misfortunes for which there is no remedy, so will the reluctance to accept Western medicine as a substitute. It is likely that the hierarchies of resort will become more rather than less complex; indeed, apart from a number of practitioners in each system, the two medical systems, traditional and modern, are viewed as complementary rather than contradictory. Practitioners who especially in Siwai are dependent on their skills for economic reward, tend to see the two systems as competitive and only minimally complementary. To the 'man on the path' however, a Western system has been added to a local system enabling a much greater diversity and flexibility of response to illness.

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NON-USE OF PHYSICIANS: METHODOLOGICAL APPROACHES, POLICY IMPLICATIONS, AND THE UTILITY OF DECISION MODELS

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Abstract—This paper considers ethnographic approaches to the study of health-care choice making in medically pluralistic settings. It focuses on the ways in which different methodological orientations may lead to varying explanations for the non-use of Western-style medical treatment, having dissimilar implications for policies concerning the delivery of health services in such settings. Several approaches are evaluated in terms of their utility for determining the relative effects of endogenous, culturally-derived influences, as compared with exogenous, primarily accessibility-related factors, as constraints on the choice of a physician's treatment. Results of the application of a cognitively-oriented decision modeling approach in a rural Mexican community are described, and the comparative advantages of this approach are emphasized.

INTRODUCTION

Social-scientific explanations of illness-related behavior are closely related to the particular methodological approach employed in their development. Foster [1] and Olesen [2], for example, have pointed out how the differing methodological orientations of medical sociologists and medical anthropologists often lead to diverse findings even when both study the 'same' category of behavior. This is no less the case within medical anthropology. Every research plan involves at least an implicit decision to emphasize some kinds of data and to de-emphasize or exclude others, although different approaches vary greatly in the extent to which certain kinds of data, and therefore certain explanations, are *a priori* excluded. When the research deals with questions having relevance for policy, as is true of much ethnomedical research, recognition of such methodological biasing is especially important. This paper considers ethnographic approaches to the study of health-care choice making in medically pluralistic settings, focusing on the ways in which different methodological orientations may yield explanations having variable implications and utility for the delivery of Western health services in such settings. Some results of a study of clients' treatment choices in a rural Mexican community that employed a cognitive-ethnographic approach are presented, and this approach's advantages are emphasized.

In a review of trends in research on the utilization of health services in (primarily rural) 'traditional' societies, Foster [3] describes an important shift in the emphasis placed upon, or even the recognition given to, two different classes of constraints on the use of Western-style medical care. Earlier research, he finds, was primarily concerned with discovering ways

in which the traditional culture, in particular native medical beliefs and practices, acted to inhibit the population's 'acceptance' of modern health care, and with means of advising health personnel on how these 'cultural barriers' might best be overcome. By contrast, more recent research attempting to account for low utilization rates has emphasized factors relating to how health services are provided. Bureaucratic complexities, the interaction styles of practitioners, and especially the costs and physical accessibility of health facilities now increasingly figure in explanations of the illness behavior of rural non-Western peoples.

Foster [4] suggests that this shifting explanatory emphasis is primarily due to changes in the study phenomenon itself, the cultural barriers model having been most applicable in the early stages of the introduction of Western medicine, with accessibility constraints becoming more important as familiarity with Western medicine increases. But perhaps equally as important in accounting for this shift, in my view, is anthropologists' increasing concern with the role of extracommunity factors as determinants of local health-care decisions. Few working in rural settings today, for example, would subscribe to the 'closed corporate' model of community organization, and increasingly attention is being given to the nature of the study community's articulation with the larger society, and to understanding how structured inequality, marginality, and mechanisms of "institutionalized exclusion" [5] affect the health-care options available to its members [6-11].

The practical significance of this shifting focus of explanation is great. Explanations that emphasize the inhibiting role of endogenous cultural influences in effect place responsibility for underuse of Western health-care services, and accompanying poorer health levels, directly with the people themselves. As solutions, they point to means of overcoming these cultural incompatibilities and to educate efforts aimed at modifying people's attitudes toward health care. At times, the ultimate solution to providing improved

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health care is even said to depend upon the general assimilation of marginal peoples into the national economy and society [12]. On the other hand, explanations centering upon the accessibility and organization of health services place primary responsibility for low rates of utilization, as well as the mandate for change, with the providers of care. In this latter view, increased use of services depends upon reducing the cost barriers and other organizational constraints operative. Such conclusions are, as Foster [13] points out, often impalatable to health-care providers, but they are ones that seem increasingly in need of persuasive, 'hard' documentation if they are to be accepted and ultimately contribute to the improvement of health services in such settings.

It is reasonable to assume that individuals' decisions concerning the use of Western curative medicine in fact result from an interaction of both cultural and health-care organizational influences. All people, in evaluating the meaning and potential consequences of an illness and in making decisions about its treatment, are guided by knowledge possessed as participants in a particular cultural tradition. At the same time, their treatment decisions must also take account of the characteristics of the available options, especially, as with Western medicine in non-Western settings, when the people have little or no control over the manner in which these options are presented to them. To meaningfully explain the distribution of treatment choices in a community requires that the role of each kind of influence be made clear. When careful distinction is not made between them, one runs the risk of attributing certain decisions—such as the decision not to seek a physician's services—to one of these influences when they are in fact due in much greater degree to the other.

This is not to say that the relative contributions of each kind of influence in explaining the reactions of rural Third World peoples to modern medicine are invariant. Just as health services vary widely in cost,

physical accessibility, operating policies, and so on, so does the role of these factors as utilization barriers also vary. Similarly, different peoples' medical beliefs and attitudes toward health care vary in their degree of incompatibility with Western medicine.

In terms of research methodologies, the best approach, in the present view, would be that which allows the identification of both endogenous, culturally-derived and exogenous, accessibility-related decision criteria, and measurement of the relative role of each as inhibiting (or facilitating) factors in the choice of Western medical treatment. The approach should not, then, involve or necessitate any *a priori* assumptions about the nature or relative significance of either type of influence. Let us consider the extent to which the various methodological approaches evident in the literature on clients' health-care choices in pluralistic settings meet these criteria, and specifically, how each might contribute to an understanding of the decision not to seek a physician's treatment.

METHODOLOGICAL DIVERSITY

For purposes of discussion, I will propose an admittedly selective and simplified typology of approaches (Fig. 1). One widely evident in the literature is what I label the 'correlational' approach, referring to studies that have sought to explain differential utilization by reference to phenomena that may be demonstrated to co-vary with specific health-care choices. These studies may be classified according to whether they emphasized: (1) characteristics of the illnesses tending to be taken to each treatment alternative (e.g. local distinctions between 'doctor-curable' and 'folk-curable' illnesses [14], or more general etiological distinctions [15]); (2) characteristics of the people tending to use each alternative (e.g. acculturative status [16, 17]); (3) characteristics of the health-care providers [18]; or (4) various combinations of

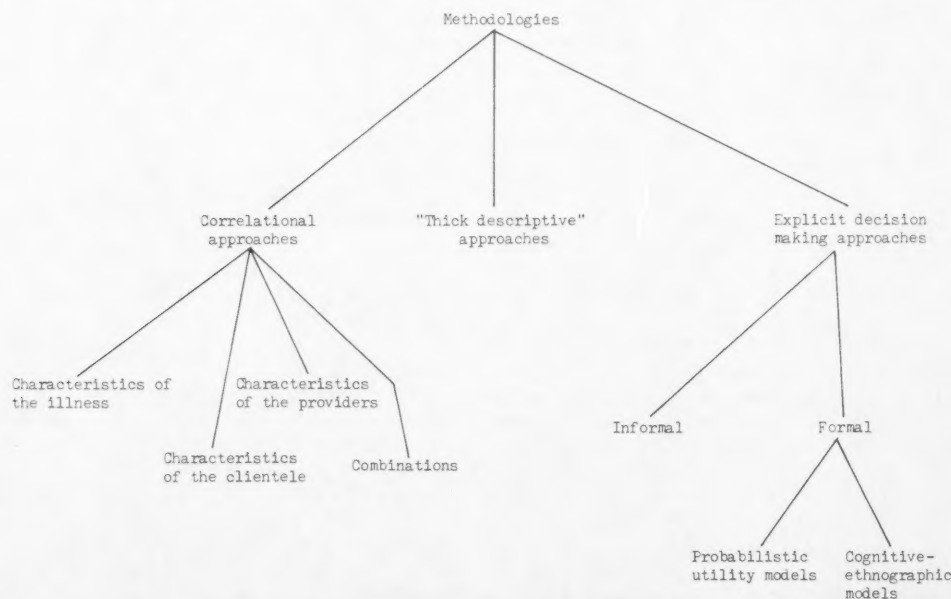


Fig. 1. A typology of some approaches to the study of illness treatment choices.

these factors [19, 20]. I use the term correlational here in a general sense, since not all studies of this type have involved explicit statistical procedures. Their common feature is the discovery or assertion of some characteristic(s) of the illness or clientele that tends to co-vary with the use of different treatment alternatives, and on this basis, to attribute to such characteristics a determinative significance in the actor's decision making [21].

A second approach, which might be labeled 'thick descriptive' [22], is exemplified in Janzen's [23] study of therapeutic choice-making among the BaKongo of Lower Zaire. This study analyzes a small number of especially complex illnesses in the belief that such cases would best clarify the multiple relationships between alternative treatments and systems of therapy and the ways in which actors view their options. Janzen follows cases through time and interprets the resulting therapeutic choices on the basis of informants' *post hoc* 'rationalizations' combined with his knowledge of the particular social position and personal history of the patient. In Janzen's approach, the cases most amenable to analysis are unusually complex and prolonged ones, and he is not primarily interested in the more routine types of illness that occur among his informants and how they deal with them [24].

A third general category I label 'explicit decision making' approaches. Here the primary concern is not with the articulation of alternative medical systems *per se*, nor with aggregate patterns of choices and their discernable regularities. Rather, the focus is explicitly upon individual actors and the considerations involved in their choices of treatment. Investigation centers upon the discovery of what information the actor considers when faced with an illness treatment decision, how the available treatment alternatives are evaluated, and what relevant constraints are operative. Studies within this category may be distinguished according to whether they involve an attempt to formally model the decision-making process. Good examples of informal approaches are Beals' [25] and Nichter's [26] analyses of health-care strategies in South India.

In the formal approaches, models of the decision-making process attributed to the actor are developed. These may involve certain preconceptions about the nature of the process, as in Fabrega's [27] probabilistic utility model of illness behavior. Here, for example, it is assumed that people are able to subjectively estimate probabilities with some degree of accuracy, that they are able to calculate utility values associated with a set of treatment 'plans', and that they will reach optimal decisions, subject to whatever constraints are operative. Others, however, have taken heed of work in cognitive psychology [28-30] and cognitive anthropology [31-35] suggesting that such models of decision making may be unrealistic in terms of the information-processing capacities they would require of the actor. Instead, they have set out to *discover*, via formal eliciting techniques, how such decisions are actually made by their informants. Important here are the various means by which potentially complex decisions are reduced or simplified to information-processing tasks of manageable proportions, since these simplification procedures signifi-

cantly affect the outcome of the decision process. Thus, in this view, it is necessary not only to know what information is considered, but how it is used or manipulated in the actual decision-making process as well. There are a number of applications of this cognitive-ethnographic modeling approach [33, 34, 36-38], although few, apart from that to be described here, in the area of health-care decision making.

The comparative advantages and disadvantages of these different approaches are several, and relative to the explanatory goals and intended uses of the research findings. Evaluative criteria might include: the proportion of the data explained or explainable; the insight gained into the wider social, political, and economic contexts within which the choices occur; insight gained into the underlying cognitive processes involved in decisions; the sensitivity of the approach to intracultural variation; the utility of the approach in monitoring change through time; and many others. Certainly no single approach is capable of illuminating the wide variety of issues of potential significance for understanding illness behavior in pluralistic settings.

Here, however, a more specific standard has been set: the success of the approach in providing an understanding of the nature and comparative importance of two different classes of barriers to the use of Western-style medical services. Again, the approach should allow for the accurate measurement of the relative effects of endogenous, culturally-derived influences, as compared with exogenous, primarily accessibility-related factors, as constraints on utilization. Accordingly, the approach should not involve or necessitate any prior assumptions about the nature or relative significance of either. To what extent have the different approaches reviewed here met these criteria?

With the correlational approach, the explanation that ultimately results is as much dependent upon the specific variables the investigator chooses to examine, as upon the actual factors considered by the actors in making treatment decisions. If, for example, data are collected solely on the acculturative status of the individuals using different sources of treatment, then the explanation for their pattern of choices will necessarily be cast in these terms. While it is conceivable that one might collect data on 'all' factors potentially relevant to treatment decisions, and thus approximate the above standard, in practice this has not generally been the case. Studies have necessarily examined a limited range of factors, often choosing to restrict consideration to one or the other of our two classes of 'independent variables'. Also problematic is the assertion of a causal connection between characteristics that co-vary with aggregate decision outcomes, and the actual process whereby these decisions, individually, come about [39].

The 'thick descriptive' approach, due to its specific explanatory goals, leads to an emphasis on unusually complex and problematic cases, at the expense of the more routine, but for our purposes equally as significant, kinds of illnesses people deal with in daily life. To the extent that prolonged, extraordinary illnesses lead to increasingly esoteric and culture-specific lay diagnoses [40], this approach would tend to over-emphasize the role of etiological incompatibility with

Western medicine as a general constraint in treatment-seeking strategies.

Among the explicit decision-making approaches, the cognitive-ethnographic approach would seem to best fit our criteria. Unlike probabilistic utility models, it involves no prior, and perhaps unrealistic, assumptions about the decision process. Compared with the informal approach, it has the advantage of offering more precise measurement of each class of utilization constraint. To demonstrate this potential, and to expand upon and illustrate additional features of the cognitive-ethnographic approach, let us consider some results of its application in a rural Mexican setting.

UNDERSTANDING NON-USE OF PHYSICIANS VIA A COGNITIVE-ETHNOGRAPHIC APPROACH

The treatment decision model described here was developed in the course of research on illness behavior in Pichátaro, Michoacán, a rural town of some 3000 people of Tarascan Indian background in the highlands of west-central Mexico [41]. Pichátaro is located about 30 km from the much larger regional market town of Pátzcuaro, the nearest source of a physician's treatment. At the time of field work, traditional medical practices were being widely followed in Pichátaro, and a number of folk curing specialists (perhaps 10-15) remained active. At the same time, recent years have seen a growing tendency toward the use of various forms of Western-style medical treatment, particularly since the construction of a dirt road through the town in the early 1970's, initiating a motor transportation link to medical resources in Pátzcuaro.

There are four major illness treatment alternatives that the people of Pichátaro generally view as available to them. These are: (1) self- or home-treatment, using traditional herbal cures or locally-sold commercial remedies; (2) treatment by a local folk curer, who use herbal remedies and other folk curing methods exclusively; (3) treatment by a *practicante*—local non-physician, largely unlicensed practitioners of Western-style medicine; and (4) treatment by a physician, most often from a private practitioner or at a government-run health center in Pátzcuaro. These alternatives contrast along a number of dimensions. One is type of therapy: the alternative may involve folk techniques (*remedios caseros*), as with traditional curers, or what are classified locally as 'medical' or 'doctor's' remedies (*remedios médicos*), as with the *practicante* and physician alternatives, or either, as with self-treatment. Another significant variable is cost, ranging from very little or nothing for self-treatment, to quite substantial proportions of household resources for a physician's treatment.

The approach taken in explaining how choices are made from among these alternatives derives from the general assumption that, in areas of life in which choices must frequently be made between alternative courses of action, the members of a community often come to have a more or less common set of standards concerning how these choices are to be made [42]. A decision model constitutes an attempt to describe these standards in an explicit, precise, and testable manner. Three questions are addressed [34, 35]: (1)

what are the perceived alternatives; (2) what information or set of criteria is considered in choices among these alternatives; and (3) what is the decision process—the principles whereby this information is used in making a choice? The answers to these questions are then formalized in a model (here, a decision tree) that specifies the different ways in which specific considerations or states of relevant criteria lead to the choice of each alternative. Once constructed, the model can be tested using independent data on the actual choices made by members of the study community in selecting among these alternatives.

The present model is an attempt to make explicit the standards by which a sample of Pichátaro residents make decisions about the source of illness treatment. It represents a formalization of their statements concerning the considerations involved in these choices. Interviews, which were done with a core group of approximately 15 informants, involved a variety of methods, including contrastive questioning techniques, ranking tasks, and the posing of hypothetical situations, as well as informal discussions about past illness treatment decisions. The essential point to all the methods used in developing the model (which are described in detail elsewhere [41]), is that they represent attempts to systematically discover from the actors themselves the nature and content of different aspects of their decision-making process, rather than to obtain data on a predetermined set of variables.

Four criteria were found to be primarily involved in these decisions: (1) the seriousness of the illness; (2) whether an appropriate home remedy is known for the illness; (3) the actor's estimate of the relative likelihood of cure using folk-type treatment, as compared with Western-type treatment, for the specific illness at hand (spoken of in terms of one's 'faith'); and (4) the costs (and transportation requirements) associated with the physician alternative and the availability of the resources to meet these.

The choice-making process involves an ordering of the available alternatives along one of two dimensions—either the estimated likelihood of cure, or cost—and a selection in accordance with one or the other of these preference orderings, subject to certain constraints. For illnesses classified as grave (i.e. life-threatening), the alternatives are ideally ordered on the basis of likelihood of cure, with resort first to the alternative ranked highest on this criterion. For non-serious illnesses (and often for all illnesses in poorer households) the alternatives are ordered on the basis of estimated cost, and the least costly (or the least costly of those not yet tried) is chosen. The principal constraints on the realization of these preferences are, in the case of serious illness, a lack of resources, and in the case of nonserious illness, lack of knowledge or unavailability of an appropriate home remedy.

Informants' judgments of the relative likelihood of cure [43] and costs associated with each treatment alternative tend to be stable across illness contexts, with a few exceptions. For most illness types—including those occurring most frequently—the two rankings are parallel, with a physician's treatment regarded as offering the highest likelihood of cure, but also the highest expected cost. Self-treatment, on the other hand, is the least costly but also considered the

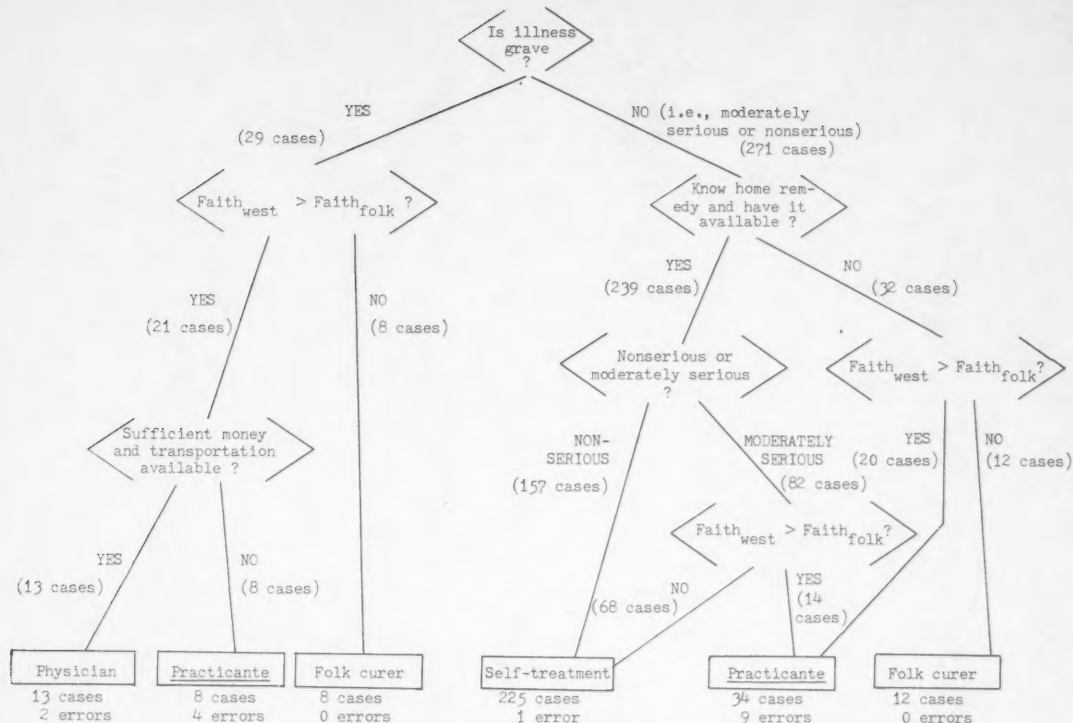


Fig. 2. Decision model for the initial choice of treatment.

least likely to bring about a cure, as compared with the other alternatives. The curer and *practicante* alternatives are between these extremes on both dimensions and, in terms of cost, approximately equal. They are not, however, considered equally likely to result in a cure: this ranking is situationally variable, their positions relative to each other depending upon the actor's estimate of the likelihood of cure using folk, as compared with Western-style treatment for this specific illness.

The principal exceptions to these general cost and likelihood-of-cure rankings of alternatives are those few illness types considered incurable with Western-style medicine—including 'evil eye' (*mal de ojo*), 'fallen fontanel' (*mollera caída*) and witchcraft-related illnesses. But since such diagnoses are relatively infrequent, particularly in the initial stages of illness episodes, the generalized rank-ordering is useful for understanding the overall process.

The model described here incorporates these basic assumptions about preferred courses of treatment in different situations, and then specifies the constraints that at times lead to the choice of less preferred alternatives. Since many illnesses in Pichátaro involve the use of more than one treatment alternative, the model is broken down into two parts: the first (Fig. 2) depicts the considerations involved in the initial choice of treatment, while the second (Fig. 3) depicts the considerations by which subsequent choices are made, when more than one treatment decision must be made in the course of an illness.

The model is represented in the form of a decision tree [44]. Decision criteria (the four listed above) are

enclosed in pointed brackets at nodes or branching points in the tree. With the exception of illness gravity, criteria take binary values. In Figure 2, the initial consideration in the choice of treatment is the gravity of the illness. If judged as grave, the model assumes a likelihood-of-cure-based preference ordering, sending us down the left 'branch' of the tree. The decision maker next judges whether Western medical treatment, or folk medical treatment, offers the higher likelihood of cure for this particular illness. This consideration, spoken of in Pichátaro as one's 'faith', is represented in Fig. 2 as an assessment of whether, in this specific case, one's faith in Western medicine is greater than one's faith in folk medicine. If one's faith in Western medicine is greater, the next consideration becomes whether money and transportation are available to consult a physician. If they are, a physician will be consulted; if not, a local *practicante* is the predicted choice. On the other hand, if the decision maker's faith is greater in folk treatment methods for this particular illness, a folk curer is the choice.

If the illness is judged initially as not grave, however, the model assumes a cost-based preference ordering, sending us down the right branch. If a home remedy is known and available, and the illness is judged as non-serious, self-treatment will be given; if moderately serious, either self-treatment or a *practicante*, depending upon a faith judgment, will be chosen. If no home remedy is known or available, the actor will choose one of the next-least-costly options, either a curer or a *practicante*, again dependent upon a faith judgment.

Figure 3 presents the considerations involved in

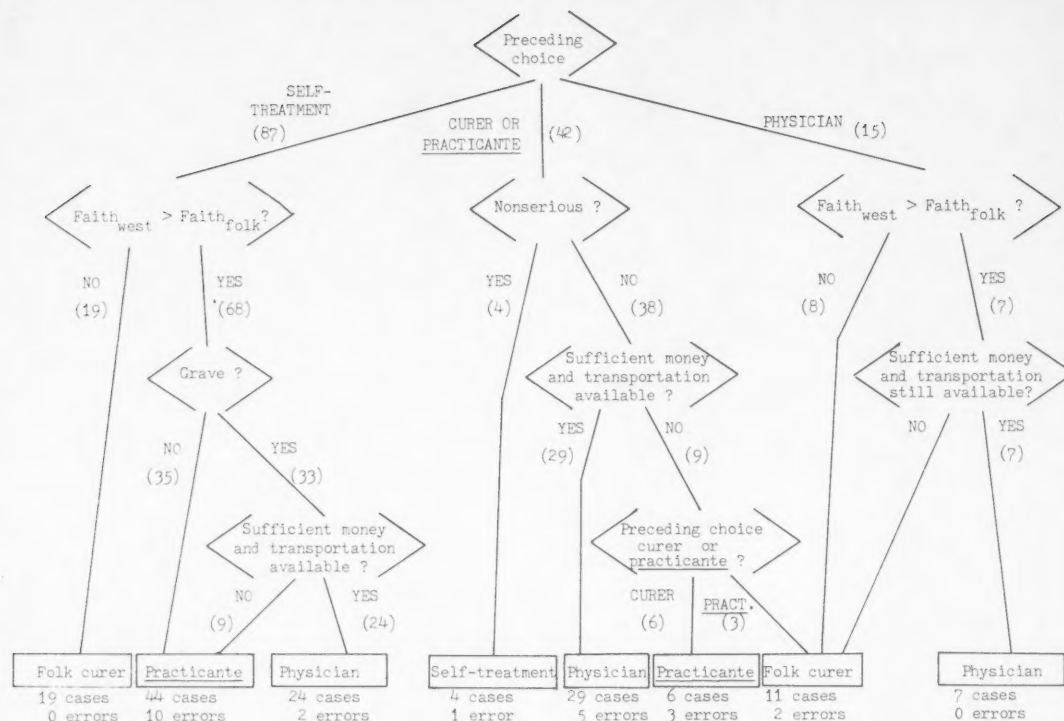


Fig. 3. Decision model for subsequent choice of treatment.

subsequent treatment decisions, when a previous treatment action fails to result in a cure. The underlying process is much the same as in Fig. 2, with the addition here of the preceding, unsuccessful choice as a significant consideration. In two instances the model assumes shifts in the decision maker's faith in one over the other form of treatment, as a consequence of the failure of preceding treatment attempts.

The numbers ('29 cases', '8 cases', etc.) scattered through the decision trees represent the treatment paths taken by a set of illness episodes collected from a sample of Pichátaro households independent of those involved in the development of the model. Sixty-two households were visited on a biweekly basis over a 6-month period, and records made of all illnesses occurring in each household during that time. These cases serve here to test the model. Each case has been 'scored' on each criterion in the model relevant to it, and the actual treatment choices made compared with those the model predicts, given such specific configurations of conditions. For example, in Fig. 2, 29 of the illnesses were initially judged as grave. In 21 of these cases, the decision maker judged Western-style treatment methods to offer the higher likelihood of cure, and in 8 cases, folk treatment. Of the 21 cases in which modern medical treatment was favored, in 13 the cost and transportation requirements could be met, and in 8 they could not. Of the 13 cases thus meeting all of the criteria for the predicted choice of a physician's treatment, 11 in fact led to that action, and 2 did not. In most instances, scoring was done on the basis of the actual explanations provided by informants at the time the episode was

recorded. For each case, the informant was asked to describe the situation that had led up to the treatment decision, to explain why other alternatives had not been used, and to relate what further actions were being considered, or had been considered, in the event of unsuccessful treatment. Most often, the considerations cited in explaining and justifying the actions taken were the same as those incorporated in the model. In those cases where there was no specific statement elicited concerning, say, the faith or knowledge criterion, scoring was done on the basis of records of similar past illnesses in that household. Independent wealth rankings of households were also used in scoring the cost criterion [45].

Overall, the model correctly accounts for around 90% of all choices scored (Table 1). If we eliminate those choices involving initial self-treatment, which tends to be a routine response to illness in Pichátaro, the complete model still has a success rate of better than 80%. These results would seem good evidence for the basic validity of the model, and for the contention that the considerations and assumptions embodied in it indeed represent important aspects of how these choices are actually made.

The decision not to seek a physician's treatment

One of the more useful features of decision-making models such as just described is that they not only specify the considerations that lead to the use of a given alternative, they can also allow us to isolate the reasons why particular alternatives are sometimes *not* used. As was discussed earlier, the literature on illness behavior among rural Third World peoples has at

times attributed the non-use of Western-style care primarily to two related 'cultural' factors: the influence of traditional beliefs, and the presence and influence of traditional curing specialists. What can the model tell us about the role of such factors, as compared with exogenous, accessibility-related factors, as impediments to the use of physicians by the people of Pichátaro?

It is possible to trace individual cases through the model, and to isolate points in the illness episode where a physician's treatment constituted a plausible choice—given an understanding of the standards by which such choices are made in Pichátaro—but was in fact not chosen because of one critical consideration. For example, consider the cases represented by the left branch of Fig. 2. Here are 29 cases judged as grave. By virtue of the likelihood-of-cure preference ordering thereby in effect, these are illnesses for which a physician is a plausible initial treatment choice. Of the 29 cases, however, less than half actually led to the use of a physician. The critical factor behind 8 instances of physician non-use was the decision-maker's judgment that folk treatment methods offered a higher chance of cure than Western-style treatment, leading to the choice of a folk curer. In the remaining cases, a lack of money or transportation (i.e. inaccessibility) was the limiting factor. Considering all cases in both parts of the model, 38 such clear-cut instances of physician non-use may be isolated. The distribution of each of 3 critical considerations in these decisions are as follows: in 8 (21%) of the cases, non-use was due to a pre-existing preference for folk treatment methods—they were considered *a priori* to offer a higher likelihood of cure. In 22 (58%) instances, non-use was due to inaccessibility—not enough money or no transportation to Pátzcuaro. In the remaining 8 (21%) instances, a physician's treatment had just been given but had not achieved a cure, leading to a shift in the decision maker's faith assessment.

These results show that the factor most frequently constraining use of physicians by the people in the sample was the perceived inaccessibility of such treatment. Much less frequently, in only 1 case out of 5, can a pre-existing preference for folk treatment methods be shown to primarily inhibit the use of physicians. Thus the view of the use of Western medical care as being principally inhibited by the persistence of traditional illness beliefs proves inaccurate in the case of Pichátaro.

We can also determine the extent to which the use of physicians is constrained by 'competition' from traditional curing specialists. Because the choice-making process involves a rank-ordering of alternatives along a particular dimension (either cost or likelihood of

cure), it is generally the case that for each specific choice, another alternative may be considered as the second-most-plausible option to have been chosen, and thus that most directly 'rejected'. For example, on the right-hand branch of Fig. 2, use of a folk curer in the circumstances defined here would most directly entail a decision not to use a *practicante*. Since the illness is not grave, a cost-based preference ordering is in effect, thus a physician is not an alternative currently under consideration. The distribution of the rejected alternatives associated with each of 57 instances in which a folk curer was used is as follows: in 39 (68%) instances a folk curer was selected in preference to a *practicante*, in 17 (30%) instances in preference to a physician, and in one (2%) instance in preference to self-treatment. These data demonstrate that in less than a third of all instances in which a curer was used, can it be assumed that this was done in direct preference to a physician's treatment. Further, of these 17 cases, 7 involved the choice of a curer following unsuccessful (from the actor's point of view) treatment by a physician; therefore, only 10 (18%) of the instances in which a curer was chosen can be realistically regarded as having entailed the rejection of a physician's treatment on the basis of a preexisting preference for traditional curing specialists. Non-use of physicians by the people of Pichátaro is thus due to competition from traditional curers in only a minority of cases, the curer being primarily 'in competition' with the *practicante*.

This example shows how, by means of a formal, ethnographically-derived model of treatment decision making, it is possible to determine in a fairly precise way the relative roles of endogenous, culturally-derived factors and exogenous, accessibility-related factors in explaining the reaction of Pichátaro's residents to Western health care. Examination of specific cases of physician non-use, as isolated by the model, would allow one to develop concrete recommendations for how health-care services for people in settings like Pichátaro might be made more usable—practically, economically, and cognitively—for their clientele.

The findings of the Pichátaro study are in line with those existing studies which have stressed the accessibility of services in explaining the response of rural Third World peoples to Western curative medicine. The results show that 'cultural' factors do at times lead to decisions not to seek such care, but in comparatively few cases. And, in a less quantifiable sense, the model even more strongly illustrates the determinative effects that the cost and inconvenience of Western health care have for the treatment decision making of Pichátaro residents. Not only do these

Table 1. Test results

	No. of cases	No. of errors	Overall success rate	Adjusted* success rate
Fig. 2	300	16	94.7%	80.0%
Fig. 3	144	23	84.0%	—
Total	444	39	91.2%	82.6%

* Without choices involving initial self-treatment.

factors sometimes act as constraints in situations where conditions would otherwise indicate selection of a physician's treatment, they are themselves the principal reasons why it is only under certain fairly extreme circumstances that a physician's treatment is considered a plausible alternative at all.

SUMMARY AND CONCLUSIONS

Investigators concerned with the role of local cultural factors in non-Western peoples' reactions to Western medicine have contributed much to improving the quality of health care in such settings [46]. At the same time, there exists a potential for disservice to the people we study when cultural barriers to the acceptance and use of Western medicine are emphasized to the exclusion of any concern with the role that externally-derived economic and organizational constraints also play in peoples' decision making. This is because tradition-focused explanations tend to place the responsibility for underutilization with the people and their way of life, rather than with the providers of health care and with the often unequal manner in which modern medical services are made available to poor, usually politically powerless, rural Third World peoples [47]. A central issue for ethnographers of health-care decisions is the development of methodological means for linking these two concerns which will allow determination of the nature and relative contribution of each kind of influence in decisions to seek, or not to seek, Western medical treatment.

Because 'emically'-based decision models, properly constructed, can identify and incorporate each of the major criteria influencing the choice of treatment, they are well suited to meeting this methodological need. Despite arguments to the contrary [48], decision models have been shown to account for actual behavior with a high degree of accuracy in a variety of domains [34, 36-38, 49]. Since they provide a view of the native logic involved in choices, and not just data upon which to infer that logic, they are particularly well suited for use when the aim of the research is to inform policy makers and planners in concrete terms of the factors influencing, or likely to influence, the target population's 'acceptance' of new alternatives [50]. They also have the advantage of producing quantitative estimates of the effects of specific factors. Finally, as Goodenough [51] has pointed out, decision modeling can provide an economical, but precise, means of ethnographic description, and one which allows the ethnographer readily to check whether closure has been reached on the subject.

The major empirical finding from the Pichátaro research emphasized here—that traditional medical beliefs and practices do not represent a primary barrier to the use of a physician's treatment, as compared with accessibility factors—is not unique to this study [see 6-11, 25], nor is it necessarily a recent finding [52, 53]. Rather, my aim has been to call attention to the ways in which different methodological approaches may bias our understanding of the role of each of these influences, and to illustrate an approach capable of minimizing this biasing effect. Regardless of the reader's evaluation of the adequacy of the specific model presented here, I hope that the potential utility of the approach has been made apparent.

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ROASTING, SMOKING AND DIETING IN RESPONSE TO BIRTH: MALAY CONFINEMENT IN CROSS-CULTURAL PERSPECTIVE

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Abstract—According to humoral medical theory, food and body states may be classified as 'hot' or 'cold'. During periods of physical vulnerability, behavioral and dietary precautions may be invoked for therapeutic and prophylactic purposes following the humoral medical principle of the treatment of opposites. Childbirth in particular affects humoral balance, and in confinement precautions are observed to replace heat lost during parturition and to protect the mother against cold and wind. Women in Asia and Latin America especially share several postpartum precautions, including physical confinement, restrictions on bathing, the prescription of hot and proscription of cold foods; for many women these precautions are supplemented with the direct application of heat, including by 'mother roasting', steaming, or smoking. The postpartum precautions, as detailed for Malay women, provide a framework for the management of birth and the ritual and social assumption of motherhood.

INTRODUCTION

Women in traditional or less industrialized societies are perhaps more familiar than Western women with birth as a personal and social experience. However, few women in any culture actually witness or participate in delivery until they have delivered their own first child, and birth loses none of its mystery either with the education of women concerning the physiological changes or pregnancy or with the medicalization of delivery [1]. Thus, regardless of its formalization, birth remains subject to mystical interpretation and magical intervention. Women in modern industrialized societies no less than in small-scale communities follow dietary and behavioral precautions to ensure a healthy pregnancy, safe delivery and rapid recovery, acting upon their own and others' beliefs regarding both physical changes and metaphysical and ritual vulnerability.

As Dana Raphael points out, giving birth does not automatically make a mother out of a woman [2]. In some cultures, a woman is a mother from the time of the detection of pregnancy; in others, the status of motherhood is conferred only after the delivery of an infant of the 'right' (usually male) sex, or after the infant is already several months old [3]. Pregnancy, parturition and the puerperium are all stages in the process of mother-becoming, a *rite de passage* which Raphael has termed 'matrescence'. In Western societies particularly, this critical process is overlooked and women are considered to have become mothers with delivery. Socially this is not the case however. Women who deliver in hospitals in effect become mothers on discharge, at which time they are given 'ownership' and full responsibility for their newborn [4]. The ritualized handing over of infant from mothercraft nurse to biological mother serves poorly to prepare the mother for the years of mothering ahead and little recognizes the importance to her of becoming a mother; this contrasts sharply with the ritual provisions in other cultures wherein pregnancy-parturition-confinement constitute a continuum inter-

rupted and punctuated by the actual birth of the child.

In particular, those cultures with a history of humoral medical theory have an especially rich scripting for the management of childbirth and the preparation of the woman as a new mother. This preparation includes dietary and behavioral prescriptions which operate throughout the pregnancy and for an extended period postpartum. In accordance with humoral medicine and concepts of hot and cold, women may avoid excessively 'hot' foods during pregnancy; after birth, they avoid 'cold' foods, may be confined to a particular area of the house, wear warm clothing and may 'roast' or 'steam' as a further measure for recovery.

In this paper, we shall examine humoral medical tradition and childbirth practices in Malay society, focusing on the therapeutic and prophylactic measures invoked for postpartum women. The substantive data presented in the paper are based on fieldwork undertaken by the author in Peninsular Malaysia in June-July 1978 and from November 1978 to May 1979, when information relating to childbirth and food habits was collected from extensive open-ended interviews with key informants and from a questionnaire completed by 278 women from five states [5]. Following discussion of humoral medical theory and the treatment of pregnant and puerperal women, and the presentation of the empirical data, we shall then consider these measures cross-culturally to explore and move towards understanding the basis of these beliefs and practices.

HUMORAL MEDICINE AND THE THEORY OF HOT AND COLD

Humoral medical theory spans all continents. Medical and ethnographic records attest its survival in the cultures of Africa, Asia, and the Americas; dispersed fragments of the theory continue in folk tradition from Europe to Australia [6].

For many cultures, humoral theory is assumed to derive from the classical traditions of Hippocrates and Galen. Accordingly, the body is composed of four elements (earth, fire, air and water) corresponding to four humors (black bile, yellow bile, blood and phlegm) which are characterized by varying combinations of the four natural properties (hot, cold, wet and dry): earth and black bile are cold and dry; fire and yellow bile are hot and dry; air and blood hot and wet; water and phlegm cold and wet [7]. This theory was borrowed into Arabic medical tradition during the early Islamic period; into Anglo-Saxon culture in the eleventh and twelfth centuries; into Iberian culture with the occupation of the peninsula by the Moors; and was taken by adventurers and conquerors to the New World: humoral beliefs and practices there diffused to folk culture and/or integrated with indigenous concepts of hot and cold.

Humoral pathology occurs also with some variation in the Ayurvedic tradition of Indian medicine, although in this case there are only three prime fluids or *dosa* (wind, gall and mucus) [8]. The influence of Greek humoral theory on Indian medicine and of Ayurvedic theory on Greek nosology remains debatable; the extent of cross-cultural borrowing between the Arabs and Indians is no less clear. Again there are certain remarkable similarities between classical humoral theory and Chinese medicine although any direct relationship between the two remains in question [9]: according to Chinese traditional medicine, the body has two vital forces or *ch'i* of opposing qualities of *yin* (cold) and *yang* (hot) and is subject to the laws of the five elements (earth, fire, water, wood and metal).

The incorporation of humoral pathology into indigenous medical and folk beliefs in Southeast Asia reflects the dominant politico-cultural influences of the region and reinforces theories of acculturation from a foreign 'great tradition' into local 'little traditions'. Humoral medicine observed in Burma, Thailand, Laos, and Kampuchea derives largely from Ayurvedic tradition brought with the Sanskritization of mainland Southeast Asia. Vietnamese traditional medicine suggests some Indian influence but derives predominantly from Chinese tradition. In the Philippines, as Hart has argued [10], humoral medicine was introduced by Spanish colonists. In the Malayo-Indonesian world, Muslim traders and missionaries were probably the major bearers of the tradition, but political and cultural links with Hindu and Buddhist India and trade links with China suggest origins possibly more diffuse [11]. Again, there remains the possibility of the indigenous origin of these beliefs.

In popular form and as observed today, the critical element of the tradition is the classification of the body and foods as hot and cold, with a lesser emphasis also on the effect of wind or air. The ranking of hot and cold by degree, and the parallel classical differentiation of wet and dry, have largely disappeared in all cultures where humoral medical theories have existed and where a simple hot-cold dichotomy continues [12].

According to humoral medical theory, health is maintained through equilibrium. Disease disrupts the hot-cold balance of the body, and in diagnosis the body is said to have an excess of hot over cold, or an

excess of cold over hot. Treatment involves adjustment of the diet to redress the imbalance: illness diagnosed as hot is therefore treated with cold food and/or medicine; cold illness is treated with hot food and medicine. Physiological changes, including pregnancy and confinement, youth and old age, also alter humoral balance and thus, for example, the elderly should avoid excessively cold foods. The overindulgence of hot or cold foods can similarly disrupt internal equilibrium; again, health may be restored by the dietary treatment of opposites. The classification of foodstuffs and medicines generally relates neither to the temperature of the item, not its spiciness or raw or cooked state, but to the reputed effect of the food on the body [13]. Thus a 'hot' food is said to heat the body; a 'cold' food cools the body. Whilst the classification of food and medicine is variable, essentially individual, and at times arbitrary both across and within cultures, in general most fruits and vegetables are classified as cold whilst meat, fried foods and condiments are considered to be hot [14].

HOT AND COLD IN PREGNANCY AND THE PUERPERIUM

As noted above, physiological changes including pregnancy and confinement alter the humoral balance of the body and behavioral and dietary precautions may be invoked to protect the woman's health in a state of physical as well as magical vulnerability.

The diagnosis of pregnancy in accordance with humoral pathology varies across cultures. Malays regard pregnancy as a hot state and appropriate dietary precautions operate for all three trimesters: with the recognition of conception, to prevent miscarriage; in later months, to prevent the birth of a large infant and thus to avoid a difficult and prolonged labour [15]. Topley, however, reports that Cantonese traditionally consider that the pregnant mother is polarized in the direction of cold and the foetus in the direction of hot; hence expectant mothers avoid foods either definitely hot or cold which might cause further polarization, generating 'wind' and condensing 'poison' in the womb [16]. Vietnamese women consider the expectant mother and foetus to be in a cold and 'non-tonic' state during the first trimester, a neutral state in the second trimester and a hot and 'tonic' state in the third trimester: thus the consumption of hot and cold, tonic and non-tonic foods are adjusted during the course of pregnancy, whilst the consumption of excessively hot and cold foods are avoided throughout [17]. Amongst the Northern Thai, pregnant women should avoid becoming physically warm through contact with heat or fire, but this prescription appears to relate to fear of retention of the afterbirth rather than to the diagnosis of pregnancy as a hot state [18]. In other cultures with a tradition of humoral medicine, there is further variation relating to the diagnosis of pregnancy and the prescription of foods [19]. Exact classification of pregnancy is therefore problematic.

Women from several cultures consider that hot food (or medicine) taken in the first trimester will act as an abortifacient and thus restrict their intake of foods thus classified [20]. However, the majority of food taboos during pregnancy appear to be invoked

for magical rather than (humoral) medical reasons and are in the interest not of the mother but of the health of the unborn child and its appearance at birth. Moreover, in Malay society and in many other cultures, pregnancy is not considered an overly vulnerable state, traditional behavioral and dietary precautions are frequently ignored and prenatal care is not a major concern.

Parturition brings about an abrupt change to the woman's ritual and physical state and in most societies with a humoral medical tradition, strict behavioral and dietary restrictions apply. The management of birthing, including the nature of decision-making, the involvement of others, the position of the parturient during labour, and the response to the newborn and the newly-delivered mother, are all culturally determined and vary considerably. But near universally in cultures with a humoral medical tradition, parturition is believed to deplete the woman of heat and to place her in a state of especial vulnerability to cold [21]. Postpartum practices aiming to protect the woman from cold and 'wind' and to restore her to health bear remarkable similarity cross-culturally.

Childbirth, then, depletes the mother of heat, blood, and 'air' or vital breath, and renders her vulnerable to cold, wind, magic and disease [22]. Coldness may prevent the circulation of blood, inhibit the discharge of lochia, delay the woman's recovery, or cause illness and even death either immediately or at a much later date. Protective restrictions for the newly delivered mother are therefore taken seriously. The woman is confined to her home, and often to a well-sealed room, for from 4-6 weeks. During this time, she dresses in warm clothing. Frequently her bathing is restricted or her bath water especially prepared with 'hot' herbs and spices for her protection. Her diet is strictly prescribed to include only foods, beverages, medicines and herbs which are classified as manifestly hot. Frequently too the additional precaution of 'mother roasting' or smoking is undertaken to provide heat externally to 'dry out' the womb. This latter practice is notable in Southeast Asia but is not unknown in other societies with a tradition of humoral medicine. Below, we shall consider in detail the puerperal restrictions as they apply to Malay women in Peninsular Malaysia, then examine the evidence of similar restrictions in other cultures.

POSTPARTUM CONFINEMENT IN MALAY SOCIETY

As already noted, in Southeast Asia the application of hot and cold properties to foods, disease and body states is part of and a remnant from an extensive humoral medical tradition. Hart's monograph is perhaps the best known study of humoral pathology in the region and provides a comprehensive analysis of hot and cold food classifications and beliefs [23]. His work amongst Malays, however, has several antecedents: Newbold (1839), Maxwell (1883), Skeat (1900) and Gimlette (1913) provide us with early studies of Malay culture, magic and medicine with reference to humoral pathology of assumed Islamic origin [24]. In 1958 and 1959, Margaret McArthur undertook a pioneer study in two Malay *kampungs* (villages) in the west coast states of Melaka and Perak: her unpublished

study offers extensive information of anthropological and nutritional interest [25]. Christine Wilson's doctoral dissertation provides further information regarding food habits and beliefs for a Trengganu Malay village (east coast) [26]; recently Carol Laderman has also undertaken research in Trengganu on humoral beliefs, nutritional status, medicine and magic [27]. Wilson, Siti Hasmah, Chen, Fraser and Millis describe variations of the traditional lying-in period of post-partum women, during which time dietary restrictions are but one of a number of precautions taken to prevent the new mother catching cold and to replace lost heat [28].

The following section of this paper draws from and builds on the above works. As indicated above, the substantive data are drawn from fieldwork in Malaysia in 1978 and 1979, which included a lengthy questionnaire delivered to 278 Malay, Chinese, Tamil and Thai women who presented at maternal and child health clinics in five states: Negri Sembilan and Melaka to the southwest of the peninsula; Penang and Kedah in the northwest; and Trengganu on the east coast. The descriptive material included below is taken from interviews with a number of key informants, all middle aged multiparous Malay women who are identified with pseudonyms. One of the women, 'Mak Enjar', was a practising traditional midwife (*bidan*) in Singapore: she, like other *bidan* in the peninsula, supervises the majority of births and confinements in rural areas.

As discussed above, in accordance with humoral pathology Malay women believe that pregnancy is a hot state, that with parturition heat is lost and the woman moves to a state of excess cold, and that during the postpartum period of 40-44 days, care should be taken to restore the woman to a state of equilibrium. Her diet and behavior is prescribed to this effect. The most dramatic of these precautions is the custom of 'mother roasting' which, as noted above, is common throughout Southeast Asia.

A number of variations of puerperal roasting and smoking exist within Malay society. Christine Wilson describes one of the most complete methods of roasting, one which she observed in the east coast state of Trengganu in 1968-9 [29]. According to her account, women, confined in the home, sleep and lie much of the day on a wooden platform or roasting bed (*salin*), beneath which a fire is burnt, to shrink swollen tissues, dry up the blood and prevent haemorrhage. Traditionally, the *bersalin* is observed for 40 days, although in both confinements witnessed by Wilson, roasting ceased after one month. In one of these cases, the woman spent less than two hours a day on the platform and was fairly active during her confinement; in the other, the woman spent some five hours daily lying over the fire. Chen similarly reports the practice of roasting by lying over a fire for one or two hours at a time, two or three times a day, during a 44-day confinement [30]. Throughout this period the woman is usually heavily dressed, notwithstanding often oppressively warm weather, with cardigans and stockings or socks, to provide further protection against cold and wind. Chen notes too the use of a large heated stone (*tungku*), wrapped with herbs, applied to the woman's abdomen when she was not lying over the fire, and the massage of the limbs, neck,

back and chest with special 'hot' herbs for the first three days postpartum [31].

Lying on a platform over a fire is but one variation of 'mother roasting' observed by Malays and is only part of a variety of puerperal practices designed to 'dry out the womb' and restore the new mother to health. The variation described by Wilson and Chen is still observed on the east coast of the Malay Peninsula and hospitals in Trengganu report several cases of third degree burns amongst newly-delivered women each year [32]. By contrast, Fraser reports that in his study community in South Thailand, women lie beside, not over, the fire for a 40-day period [33]. And Asmah, one of my informants from the northwest state of Kedah, reported the following *berdiang* observed from the third or fourth day postpartum to the 44th day:

Mustard and other seeds are thrown on a charcoal burner so the smoke is spicy. You sit (naked) virtually over the burner, a blanket over you and the burner as a tent, and you sweat in the spicy smoke. Then you have a bath with certain leaves. After the bath, the stomach is oiled then covered with (powdered) lime (*kapur sireh*, used in chewing betel) and lime juice (*limau nipis*). The four or five yards of *bengkung*, a very thick strong cloth, are wound from under the bust to the knees: this forces you to take little steps so your muscles are not stretched. At the end of the 44 days, you feel fresh and firm, with no stretch marks.

Asmah elaborated that during pregnancy the woman's pores opened and she absorbed air, and was thus vulnerable to unhealthy and evil elements. Parturition increased her vulnerability by depriving her of heat and by placing her in a polluted state which attracted evil spirits.

Safiah, another Kedah informant, observed the *berdiang* after bathing under the supervision of a traditional midwife, but only for half an hour a day and only from the 39th to 44th day of her confinement. She used mustard seeds, fenugreek and the leaves and dried roots from *tutup bumi* (*Elephantopus*) to spice the smoke: she explained that the smoking cleansed the body of 'dirt' including smell and caused the vagina to shrink. Whilst she observed the roasting for a protracted period only, she applied an iron (*tungku*) to her abdomen for the full 44 day period from 7.00-8.30 in the morning, after bathing and from 5.00-6.30 each evening. Safiah explained that the iron was heated for about two hours on charcoal first, then placed on leaves such as *daun gelanggang* or *Cassia* leaves, *daun kankung laut* or *Ipomoea digitata* and *daun tahi ayam* or *Ageratum conyzoides* and wrapped in cloth; the weight of the iron varied according to the individual. Safiah bathed daily in the morning in warm water with lemon grass, *Pandanus* leaves and camphor plant leaves (*Blumea balsamifera*), then rinsed with flower water bought from a Chinese shop and dusted herself with powder, including sandalwood to smell nice. Heated lime and lime juice was then applied to the abdomen, and the binding wrapped: Safiah, though, used alcohol spirit and wore a Western corset instead [34].

Adibah, a Singapore Malay, also reported smoking or *ganggang*. In her detail of puerperal custom, mustard seed, fenugreek, and coriander are tied in a bag of cloth and boiled in bath water, then guava leaves are thrown in. This spicy water used for bathing

serves to keep out the 'wind' and helps to heal the woman internally. After the morning bath, the woman undergoes the *berganggang*, with benzoin and mustard seeds being thrown on the charcoal to smoke the birth canal. The sweat from the smoking is then rubbed off. Next green coconut oil is applied to the abdomen to prevent irritation, after which the lime and lime juice is applied before binding. A small 12"-deep cloth is used for the first two or three days postpartum; thereafter the wider *bengkung* is used. In addition, fresh cloves are boiled in water until the water is thickly spiced, this water is to be used by the confined woman to wash her crutch after urination. According to Adibah, bathing should be avoided on wet and cool days, but the smoking and binding is a daily ritual regardless [35].

Other behavioral practices relate less clearly to humoral medical theory. Asmah, from Kedah, ground cinnamon bark with water to apply to her forehead, to keep away wind and to avoid headaches from wind entering the temples. Adibah, from Singapore, maintained that eyesight was poor after birth, and that a mixture of lime, *sepang* bark (*Caesalpinia sappan*), and rose water should be applied on the forehead over the eyes continually to keep the head cool and help restore the eyesight: according to her, then, the body should be kept warm but the head cool. Mak Enjar, a Singapore midwife, explained that the paste on the forehead prevented 'white blood' going to the eyes: she ground together for the paste onions, cummin, *kayu serapat* (*Salacia flavescens*), cloves, tailed pepper, *cekur* (*Phyllanthus frondosus*), and guava or *turi* (*Sesbani grandiflora*) leaves.

Further prescriptions protect the newly-delivered mother from supernatural risks. Aswah explained that evil spirits were attracted to the mother because she was polluted. Women postpartum tie their hair in a tight bun with a nail through it to ward off evil spirits, and place *daun geroda* over the door for the same purpose [36]. Women should not knit, sew, or cut throughout the confinement, since blood would spurt out of any wound, causing lockjaw and death. Women are considered most vulnerable magically from the 41st to 44th day of their confinement and should be especially careful to observe the behavioral restrictions, avoiding cutting themselves or stubbing a toe at that time.

The above puerperal practices, or variations thereof, are not observed uniformly amongst peninsular Malays. Haslinda from Kuala Pilah, Negri Sembilan, reported that in her village, 3 or 6 days after parturition (but not the 4th or 5th day), the midwife massaged the whole body of the mother to 'bring up the womb' as a prelude to binding, using pure coconut oil made in the village and prayed over by the midwife. Haslinda was familiar with variations of roasting and smoking but they were not practised in her community: she suggested it was a custom in Johore and Perak and amongst Javanese residing in Negri Sembilan.

As noted above, roasting and smoking are part of a broader set of puerperal behavioral prescriptions aimed at protecting the newly-delivered mother from cold and wind, which include her confinement in a room well-sealed against draughts, the use of herbs and warm water for bathing and wearing heavy clo-

thing. These precautions are reinforced by extensive dietary restrictions.

Like the behavioral precautions, dietary precautions vary throughout the peninsula. Immediately after delivery, a cup of tamarind pulp, sugar and warm water may be drunk by the woman to expel lochia from the uterus [37]. Asmah, a Kedah informant, did not refer to this drink, but recounted that for the first three days postpartum, first thing in the morning she drank a juice from turmeric root (*kunyit*) and rock salt to 'tighten her inside'. For the next three days, she drank juice from fresh ginger root and rock salt; thereafter she took a concoction of boiled coconut water, lemon grass and herbs. At other times, she drank water boiled with ginger and a little sugar, to warm her and get rid of the 'air' inside her. Haslinda from Negri Sembilan took the turmeric and salt juice for the full 44 days postpartum, using about half a kati (c. 300 g) of turmeric root each time; she maintained that this juice helped flatten the stomach, improved the blood and kept the woman looking youthful. Haslinda also drank daily *ubat periuk* from a root boiled in water, believed to be 'good for the womb'. Adibah from Singapore prepared the juice of turmeric with honey and egg yolk as a morning tonic for the full 44 days, but noted that some women found this mixture unpalatable and ceased after the seventh day. Mak Enjar, the midwife from Adibah's village, prescribed to her patients a daily dose of *ubat periuk* which included in its preparation turmeric and ginger, *seperantu* (*Sindora sumatrana*) and pepper and introduced other herbs or *jamu*, such as *semangkok* seeds (*Scaphium affine*) after the fifteenth day of confinement. Safiah, another Kedah informant, ground fresh turmeric with seven different flowers and warm water to take for the three mornings from the 39th day of her confinement; she took Dom Perignon champagne for the 44-day period, then *rempah ratus* (100 spices) twice a day for a further month [38]. Others took *makyun*, a mixture of spices and lemon grass fried in coconut oil, to shrink the uterus and to strengthen abdominal muscles. All informants, and the women of the larger survey I undertook, at other times during their confinement drank warm ginger water and occasionally coffee, and strictly avoided plain water, other 'cooling' beverages, and usually tea.

Similarly, solid foods are restricted. In general cold foods, including most fruit and vegetables, are proscribed; hot foods are prescribed. Wilson reports an ideal diet of rice, roasted fish, black pepper and coffee, and although the observed diets of young mothers in her study village included some other foods, general proscriptions were observed and had serious implications for the mother's health [39].

A variety of reasons exist to explain the extensive food proscriptions. Respondents to the survey maintained that cold foods could cause swelling, increase the lochia discharge and make the uterine and vaginal muscles 'watery'; failure to observe the proscriptions could cause 'aching veins' in later life. Oily foods could also make the uterus 'watery'. Sharp foods, such as pineapple, vinegar and sour mango, caused rashes and caused veins to swell, although certain sharp foods, such as *pangaga* and *maman* shoots, were believed by some women to help the womb shrink. Eggs, 'itchy' fish (including a large number of salt

water fish and seafood such as crab and prawns), and sometimes also chicken and beef, were avoided since they might inhibit the woman's general recovery and prevented healing where the perineum had torn or where the woman had had an episiotomy. Food described as 'windy', including cucurbits and tubers, were also generally avoided, although some women argued that the consumption of windy food forced the body to expel other wind or air within the body. Other foods classified in a personalized and arbitrary fashion as 'poison' (*bisa*) were again avoided, since they would weaken the woman, inhibit her recovery and could cause convulsions, coma and death.

From key informants and the surveyed women, some 120 foods and groups of foods were listed as proscribed. Over half the women included all cold foods, cold vegetables, or fruit and vegetables; others distinguished particular cold foods only, including certain bananas, coconut water, cabbage, *kankung* (ipomea leaves), mustard greens, spinach, beans gourds and cucumbers. Papaya was proscribed, by one informant for three months postpartum, or the woman's stomach would not go down; watermelon would make the uterus weak and 'watery'. High water content foods in general, including soups (e.g. *laksa*) and watery curries (*kuah*) were to be avoided. Windy foods including yam, taro, sweet potato, cassava, and jackfruit were occasionally considered taboo; sharp foods including mangos, citrus fruit and bamboo shoots were more frequently proscribed. A wide variety of fresh water fish and seafood was also proscribed, although baked or dried fish including *ikan bilis* (anchovy), *ikan kembang* (mackerel) and *ikan parang* (wolf herring) were considered safe and in fact constituted a major part of the confinement diet of Malay women.

Observance of these dietary taboos was variable. Most women followed a traditional confinement and its dietary demands for at least part and usually the full term. However, some 10% of survey respondents ignored traditional procedure and did not modify their diet in any significant manner: either because they were under medical supervision, because they were taking (Western) medicine which they believed rendered the traditional precautions unnecessary, or because they felt that such practices were too much trouble and had no real effect.

HEAT IN CONFINEMENT IN CROSS-CULTURAL PERSPECTIVE

The extensive behavioral and dietary restrictions described above are by no means peculiar to Malay society. Both Indian and Chinese women in Malaysia similarly believe that a woman loses heat in childbirth. During confinement, observed by both ethnic groups for 30 days, the woman must restore her body to a state of equilibrium and protect herself from catching cold or 'wind'. Most dietary and other practices relate to these beliefs.

Indian women take hot drinks such as coffee and hot foods such as garlic and onions for the first three days after delivery. On the third day, the newly delivered mother bathes with margosa and tamarind leaves to relieve aches and pains and to encourage

lactation. She takes special spicy food, such as a curry of coriander, chili and salt fish and avoids all cold foods including most fruit and vegetables. For the first 15 days of confinement, she takes a tonic which includes garlic, ginger, pepper, rice, nutmeg and cummin and which is said to relieve backache and aid lactation; she also eats daily a cummin seed, asapheotida and palm sugar mixture [40].

Similarly Chinese women should only eat hot foods. Only ginger water, a broth made from fried rice and ginger, may be drunk. Chicken should be dry-baked in hot salt, steamed with wine, or stewed with sesame oil and rice wine. Pork liver may be eaten, fried with ginger and linseed oil, to 'renew the blood'. Turmeric may be taken to expel wind and to tighten the uterine muscles; ginger steamed with Chinese medicine (*leng seng yuen*) is also taken to expel wind; a drink (*char lat*) made from cockroach droppings and dried eggshell serves the same purpose. Cold foods, including food cooked the previous day, plain water, fruit and vegetables, are proscribed for fear of asthma, rheumatism, arthritis and other aches and pains [41]. Bathing is proscribed until the twelfth day of confinement, and then only in warm water; after bathing the woman should drink warm rice wine with pork and ginger to protect herself against wind. Hair may not be washed for the first 21 days to avoid headaches and wind [42].

Variations of these practices are common in other Indian and Chinese societies. Pillsbury reports extensive taboos applied for a full month convalescence in Taiwan, when women 'sit out the month' to restore the body's imbalance and to prevent ailments in later life: restrictions include refraining from bathing and hair-washing; confinement to the home; the proscription of cold and prescription of hot foods; and avoiding exposure to wind, including from a fan or air-conditioning. Other restrictions involved are based on belief in the polluting powers of placental blood [43]. Studies of women in India provide similar evidence of therapeutic measures to restore lost heat. Katona-Apte reports that in South India, confinement may last from 10 to 40 days. The woman is considered dirty and defiling, and often stays within a small poorly lit and ill-ventilated area of the house. For the first 3 days postpartum, she takes only coffee; for as long as 6 weeks, her diet is severely restricted [44]. Shosh reports a similar restricted diet for 9 days postpartum; Eichinger Ferro-Luzzi provides extensive details of food taboos, particularly of foods classified as cold or windy (*vayu*), which are observed for the first month after delivery [45]. Many of the food proscriptions relate to the ascribed effect of the food on the infant, transmitted through breast milk, as well as the effect of the food on the mother in terms of hot and cold.

Whilst dietary restrictions, physical confinement and restrictions on drinking, bathing and washing hair in ordinary water are common, the particular practices of the external application of heat, including 'mother roasting', appear to be confined in Asia to the Southeast Asia region.

Several descriptions exist of mother roasting and related puerperal prescriptions in Thailand [46]. In its traditional form, women lie by a ritually lit and extinguished fire (*yu fai*), covered with turmeric to pre-

vent burning, for much of the confinement period [47]. Hanks argues in her description of the ritual that whilst drying out the womb is a manifest function, lying by the fire serves several purposes: the fire magically perfects the mother as a compassionate and moral being; strengthens and restores her health by ridding her of bad blood and dangerous fluids; transforms her to a better nourisher, granting her lasting and beneficial nursing habits; and strengthens her *khwan* or soul to withstand spirits. Lying by the fire, then, treats the physical effects of childbirth but serves also to bring the woman to full maturity as a mother: 'Maturity did not come just by bearing a child. The fire brought about the transformation' [48]. Hanks notes that the 'fire-rest' was optional rather than mandatory, but most women in Bang Chan underwent the ritual at least once.

Mougne reports three alternative methods to lying by the fire in northern Thailand. In one, *khao sao* ('entering the tent'), a well-heated stone or brick is placed in a freshly-dug pit in the floor of the house, over which the woman constructs a tent from a woven mat and towelling or cloth. She then places leaves and/or bark on the stone, squats over it and pours boiling water onto it, thereby creating steam causing her to sweat heavily. In a second method, *rom ya* ('to inhale medicine'), the woman squats over a pot of boiling herbs and bark, again under a tent or a blanket to concentrate the steam. Lying by the fire continues for a 15-day period, whilst the two smoking/steaming methods are undertaken for 2-3 days, for half an hour at a time, towards the end of the confinement. A third alternative to lying by the fire, undertaken nightly from the fourth or fifth day postpartum and for as long as the woman wishes, involves the application to the woman's abdomen of a heated brick with pounded herbs and bark, wrapped in a cloth [49]. Women believe that drying out the womb is an effective means of birth control, as well as relaxing the mother and protecting her from ailments.

Amongst Thai women as amongst Malays, lying by the fire and variants of smoking/steaming are only part of the confinement, which includes physical confinement, restrictions on bathing, heavy clothing, stomach binding, avoidance of smells, the proscription of a wide range of foods and the prescription of a wide range of foods and the prescription of especially hot foods. Hanks, for example, reports a strict diet of rice with salt, dried fish, baked banana and boiled water [50]. Mougne notes also the proscription of unboiled water which is believed to congeal blood in the womb; her informants drank throughout confinement a special drink from water boiled with a root (*Zingiber cassumunar*) and ate a limited amount of rice cake and salt, roast pork and certain vegetables [51].

Variations of these confinement practices occur elsewhere in Southeast Asia also. In Burma, women observe a 7-day confinement to the delivery room, with steam bathing, sitting on hot rocks or bricks, smearing the body with turmeric, regularly drinking turmeric powder in water to encourage sweating, following a special diet of salt fish and avoiding cold foods (including in this instance meat, eggs and milk as well as fruit and vegetables): all to purify the mother and restore bodily imbalance [52]. Lao

women similarly roast and inhale hot water for a 25-day confinement [53]. Vietnamese women remain in a well-sealed and darkened room for 30 days; like Malay women, they lie on a bed over a charcoal burner for the full month; take a herbal steam bath thrice daily; are massaged with ginger and saffron; place warm bricks or warm salt on their abdomen; strictly avoid cold and toxic food and ideally eat only rice gruel with salt and pepper [54]. Filipino women may be roasted by lying beside a stove for up to 30 days after delivery to stop the lochia, restore the uterus to pre-delivery position, and to alleviate soreness; alternatively they may squat over a clay stove with live coals under an improvised tent or sit on a chair over hot water, stones, and burning twigs. In some areas, women are "bathed" in smoke from smouldering leaves; they are massaged with coconut oil; and are forbidden cold food, including water and other foods which might cause the uterus to 'slip' or cause haemorrhaging [55]. Similarly, Iban women, nominally Christians, apply a poultice of ginger to their abdomen and sit with their back to the fire to 'dry out'; ginger water only may be drunk for the first 3 days postpartum and their intake of ordinary water is limited for the first 7 days. Here, however, postpartum food taboos in general appear to relate to non-humoral beliefs about the effects of foods [56]. Acehnese women in North Sumatra again lie on a platform over hot bricks for from 20 to the full 44 days of confinement, bathe minimally and are massaged with coconut oil. Food taboos are introduced only after the seventh day but may continue for 5 or more months: these taboos appear also to be peculiar to the region [57]. By contrast, there is no evidence of the treatment of puerperal women with heat in Java and Geertz reports a prescribed potion designed to cool, not heat, the mother [58].

But mother roasting and like practices are not isolated to a Southeast Asian stage. Ethnographic data from societies with a history of humoral medicine provide evidence of the extensiveness of the taboo on cold foods during confinement as a therapeutic and protective measure for both the mother and child. In a number of cases (but not all), these dietary measures are reinforced by behavioral precautions which stress the avoidance of cold (e.g. proscriptions on bathing, confinement to a well-sealed room) and the application of heat (warm clothing, lying by a fire). Kelly and Manzanedo, for example, report for Mexican women an ideal diet as restrictive as that prescribed Malay women, to be observed for a 40-day confinement; additionally women avoided bathing, took herbal potions and douched with or bathed in the smoke of local plants [59]. Elsewhere, Kelly reports that the postparturient "cannot leave the house; she remains in her room; going out, she would be exposed to 'air'. This would give her sharp pains in the temples and eyes and would weaken her vision" [60]. Kelly also reports a post-partum herbal bath in a makeshift sweat-house, believed to be vital to restore the health of the new mother [61]. Wiese reports that Haitian women customarily take a hot leaf bath and avoid cold foods during confinement [62]. Saunders refers to women standing in the smoke of dried petals over hot coals to prevent postpartum haemorrhage [63]; Griffin observes that amongst the Seri Indians of

Mexico, the confined parents (both mother and father) lie beside a ritual fire for 4 days postpartum [64]. Métraux refers to the application of hot flat stones to the stomach of newly-delivered mother on Easter Island, where humoral medicine had been borrowed from Chileans [65]. Morgenstern provides instances of a 40-day confinement with mother roasting amongst Muslim Albanians, and a 40-day confinement with a taboo on bathing amongst the Bedouin of the Arabia desert [66]. The Hausa-Fulani of Nigeria again confine the newly-delivered mother to a small room for a 40-day period, during which time she lies on a bed over a fire in order to 'keep away the cold'; daily or twice daily she is bathed in near scalding water also [67]. And Bagnall reports that North African women squat over hot herbal water; Pondo women also lie by a fire [68].

Further, puerperal practices relating to heat are not confined to areas where humoral medical theory was observed historically or where it is a living tradition.

In Anglo-Australian society, there is evidence of the treatment of confinement with heat which perhaps derived from medieval humoral medical practices. An Irish-born witch/herbalist/midwife who lived and practised throughout her life (1888-1963) in a large Australian country town regarded the immediate postpartum period as a time in which the mother was vulnerable both physically and mentally. A woman over whose delivery she had presided was given a hot herbal bath in a large wooden tub 3-4 hr after delivery; she was then kept in a bed warmed with hot stones, water bottles, or earthenware carney jugs for the next 48 hr on a restricted diet, during which time the infant was not separated from its mother [69].

In contrast, Janice Reid [70] has provided details of steaming/smoking ceremonies amongst a northern Australia Aboriginal community (the Yolngu) where there is no evidence of classical humoral theory: here, the ceremonies serve to purify individuals from a ritually or physiologically polluted state, including men following rites of revelation (initiation ceremonies), girls following their first menstrual period, and women post-partum. According to a male informant:

And the baby—when it was born we didn't have a big hospital. We had a different law. When the baby was carried in the stomach and baby would be born in some place, the relatives would hold the woman round the chest and massage downwards so the baby was born himself. The mother (the mother's mother) made a fire with a stone in it and got the skin (inner bark) of the stringy bark tree (*Eucalyptus tetradonta*) and put it in water and stringy-bark and leaves (put on top of the fire) and the woman sits (squats over) the fire which is a little bit hot. This makes them feel good so that the baby won't die. And they put their breasts in the fireplace to make plenty of milk for the baby to drink.

Traditionally, two ceremonies were held: the one described above immediately following delivery to promote the health of the infant, to encourage lactation, to provide protection against early re-conception, and to heal any perineal tearing; the second following the cessation of the lochia flow to free the mother of food taboos. Today, the two appear to have been collapsed into a single ceremony conducted, where the mother has delivered in a Western hospital, after her discharge.

Further instances of roasting, smoking and dieting, presumably independent of the humoral classification of the puerperium as cold, follow a common theme. Cherokee Indians, for instance, massage the parturient with a fire-warmed hand to expel the placenta; the new mother should not eat any fish for the first few days postpartum "because fish have cold blood, and they would therefore chill the blood that has still to come out of her, and would cause it to clot" [71]. Among the Jivaro and the Kurtatchi, heat is applied directly to the vulva to stop the lochia flow; amongst the Tanala, women lie beside a smouldering fire for 8 days; amongst the Tabatulabal, women lie on a mat in a hot trench for 6 days [72]. Trobriand Island women traditionally lie for much of a month on a bed over a fire; according to Malinowski, "this is a matter of hygiene, as the natives consider such baking and smoking to be very beneficial for the health, and a sort of prophylactic against black magic" [73]. Thompson and Sahlins both note that in the past in Fiji the newborn infant was ritually steamed over a wooden bowl of cut leaves, water, and hot stone on the fourth day after birth; Sahlins notes too that the mother of a royal child was symbolically 'cooked' (in fact, steamed) following the birth of her first child [74]. Sahlins also reports that "a smouldering fire is kept burning near the mother and infant for ten days in the rear, sacred section of the house of confinement, and the doors of the house are tightly shut" [75]. According to Teckle, in contemporary Fijian society heat is rarely applied directly either by steaming or by fire. However the notion of heat remains extremely important both for women during pregnancy and lactation, and for the neonate. Women wear several layers of clothing and are massaged throughout pregnancy and during labour to keep their breasts and abdomen warm. A fire is lit as soon as possible after the onset of labour to prepare food for the mother: this food is eaten whilst it is still hot. The infant is dressed warmly to 'keep out wind'; the woman also continues to dress heavily to keep her breasts warm through lactation to ensure the production of milk [76].

RATIONALES OF CONFINEMENT PRACTICES

Cross-cultural borrowing may explain the incidence of practices such as mother roasting in parts of Southeast Asia where there is no evidence of humoral pathology historically, as amongst the Iban, but this is by no means the sole nor the obvious explanation of the coincidence of this phenomenon and fails to account either for the apparent autonomous existence of like practices in areas beyond the sphere of humoral influence, or for the absence of many heat-related practices in areas with a tradition of humoral pathology. The pre-existence and the indigenous origin of the treatment of birth with heat is therefore equally credible: accordingly, mother roasting and other treatments with heat of the new mother and infant were common in Southeast Asia and elsewhere; the introduction of humoral medical theory, with its diagnosis of pregnancy and confinement in terms of hot and cold, provided a new rationalization of these practices and reinforced their observation.

Western medical practitioners (and scholars) remain in disagreement about the value of the application of heat in response to birth; the proscription on fruit and vegetables has been attacked especially. But certain aspects of traditional confinement are accredited with some scientific basis: the confinement of the postpartum woman to the home ensures that she rests and avoids contact with carriers of infection; the emphasis on keeping the mother warm and out of draughts provides further protection in colder climates (e.g. China); the prescription of protein-rich foods provides her with nourishment which she may not ordinarily enjoy [77]. Thus certain puerperal practices may simply formalize through a set of rules the common-sense care of the woman and the neonate.

However, emic rationales provide the more substantial explanation for the endurance of the use of heat after birth. According to respondents, the taboo on cold foods, the consumption of hot foods and the direct application of heat relate to the need to expel the blood and to dry out the womb. Coldness, either from 'cold' foods or the weather, may congeal the blood and inhibit its discharge: Harwood reports that Puerto Ricans believe that if the lochia is not expelled, it will flow to the head and cause 'nervousness' or even insanity [78]. Many cultures force the post-parturient to remain upright for the first few days after birth to ensure that the lochia is discharged; others avoid cold environmentally and through ingestion to this end. Heat serves positively to 'dry out' the womb, although it is not the only means by which the drying is achieved: other practices include the consumption of large quantities of salt or salty food (for example, among the Hausa-Fulani and Thai and Malay women), bathing in a strong saline solution, or, as in the case for women of Oman, South Arabia, salt-packing the vagina [79].

The importance of measures to dry out the womb leads to a second rationale, whereby lochia like menstrual blood is considered to be defiling, and the woman polluted ritually and physically whilst the flow continues. In most societies where the confinement of women postpartum is strictly prescribed, women in fact are considered to be in a state of ritual pollution, and their participation in devotional, social and sexual activities may be prohibited or strictly limited. The use of heat in an institutionalized and circumscribed manner provides for the ritual cleansing of the newly-delivered mother and establishes the means by which she may re-enter society.

But the use of heat, whilst significant, is only a constituent of the confinement practices which as whole function to mark the final stage of the *rite de passage* of mother-becoming. Lévi-Strauss extends the application of direct heat in various *rites de passage* to argue for the symbolic connotation of the use of heat, whereby individuals who are 'cooked' are always those deeply involved in a physiological process [80]. Accordingly the puerperal woman, by contact with heat, is 'mediatized' and socialized [81]. Hanks preempted this argument when she argued, as outlined above, that not parturition, but the fire itself, made the woman a mother and brought her to maturity. Even if we reject this critical symbolic role of heat during confinement, the use of fire, hot water,

hot food and so on provide the grammar to mark out birth. The use of heat-related practices marks as culturally and psychologically significant a biological-medical event; this in itself explains the persistence of particular confinement precautions regardless of the extent to which childbirth has been medicalized and subsumed within a Western health care system. For some women traditional post-partum practices are considered redundant: institutionalized care and Western medicine are believed to provide sufficient protection for both the new mother and child. However, in other cases Western medicine, treatment, and materials are incorporated into a traditional schema and the essential rationale for confinement behavior remains unchanged. Thus the perineal heat lamp, used to heal episiotomy wounds in Western-style hospitals in north Thailand, is rationalized as a Western development for 'drying out the womb' [82]. Northern Thai women place hot water bottles and metal containers filled with charcoal on their abdomens instead of lying by the fire [83]; Vietnamese women similarly replace charcoal braziers with hot water bottles, electric blankets and radiators [84]. And, as noted above, Malay women replace the lime poultice and traditional *bengkung* binder with alcoholic spirits and a Western corset.

Ultimately, it is as a medium by which women are able to become mothers (and come to terms with becoming mothers) that the behavioral and dietary precautions of the puerperium are important. Medical personnel may indeed believe, like the doctor in Alma de Groen's play *The Joss Adams Show*, that giving birth is easy, "like having a shit after breakfast" [85]. But for the expectant mother pregnancy, parturition and confinement remain events essentially unknown and understood until directly experienced. Prescriptions governing the diet and behavior of women which derive from traditional medical theories, including those from humoral pathology and those which draw independently on the virtue of heat, offer scripting for both the pre- and post-partum periods, thereby providing the mother and those around her with a specific cultural framework within which to manage birth.

REFERENCES

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4. Anne Banning has recounted this social assumption of motherhood in an Australian setting. "Recently I visited a new mother and father who were leaving a maternity hospital with their five-day old baby girl: I saw re-enacted the age-old hospital custom symbolising the hospital's ownership of the child unto mother and baby are discharged: the hospital sister carried the baby outside the hospital and was not allowed to hand over the baby until the father had brought the car to the hospital entrance. "Then there was the ceremonial handing-over of the baby, with the hospital having discharged its responsibility. The excuse given was that the hospital maintains liability (and may be sued) while the baby is on the premises. The mother has very little responsibility (and therefore no ownership) while the baby is in the hospital. The father has no responsibility at all and is only allowed to see his baby by courtesy of the hospital, at times allocated to visiting." Banning A. Who owns the child. *The Australian*, p. 7. 10-11 May, 1980. See also Raphael, *op. cit.*, p. 67.
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 14. My analysis of foods classified as hot and cold by Malaysian respondents (predominantly Malays and Chinese) indicated that cold foods have a higher water content, less protein, less fat, lower carbohydrate content, and fewer calories than hot foods, but the range was broad. Frequently, too, there were contradictions: mutton and certain fruit such as rambutan (*Nephelium lappaceum*) and watermelon were classified by some respondents as hot, others as cold, see Manderson, *op. cit.* The generality is maintained but the contradictions more marked cross-culturally: Lewis, for example, reports that his Mexican respondents considered meat to be cold, see Lewis O. *Tepoztlán: Village in Mexico*, p. 12. Holt, Rinehart & Winston, New York, 1960.
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 31. The terminology is problematic. *Bersalin*, used by Wilson to describe both roasting and the lying-in period, conventionally refers to parturition. *Berdian*, used by Chen for roasting but by my Kedah informants for smoking, literally translates as "to sit near a fire to warm oneself". *Ganggang* was used by Singapore informants for smoking but literally means either to dry over a fire or to warm oneself by a fire. McArthur (p. 27) reports that her respondents used *bersalai* for roasting; this term may also be used for drying. Similarly Chen uses *tungku*, correctly, for a large cooking stone; my Kedah informants used *tungku* to describe a traditional iron.
 32. Dr Alias. Personal communication.
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 34. Siti Hasmah similarly reports that Kedah Malay women sit on a high stool over a burner after bathing, thereby smoking the birth canal to assist stopping the lochia; she also reports massage with embrocation, the application of a hot stone, brick, or iron on the woman's abdomen for half an hour to an hour each day and the use of lime (*kapur*) with binding. S. Hasmah, *op. cit.*
 35. Mak Enjar, the midwife/masseuse (*tukang urut*) practising in Adibah's village, provided the alternative spices whilst confirming the procedures and their order: guava leaves, turmeric leaves, lemon grass and ginger were boiled in the bath water; only *kemenyan samsu* was used with the charcoal for the *ganggang*. She used coconut oil with lime and lime juice on the woman's abdomen before binding, but also prepared a special massage oil with pound ginger and turmeric root, tailed pepper, cummin, black pepper, *kayu tarek angin*, *akar kelor* and *cekur*. See also Kuah K. B. Malay customs in relation to childbirth. *Med. J. Malaysia* 27, 83, 1972; and Wylde E. M. Some superstitious customs surrounding childbirth noted in Kuala Lumpur. In *Applied Nutrition in Malaya* (Edited by Simpson I. A.), p. 132. The Caxton Press, Kuala Lumpur, 1957.
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'TONIC', 'FUEL' AND 'FOOD': SOCIAL AND SYMBOLIC ASPECTS OF THE LONG-TERM USE OF PSYCHOTROPIC DRUGS

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Abstract—This paper examines some of the many dimensions of meaning that psychotropic drugs can have for those that use them on a long-term basis. It aims to shed light on the problem of psychological dependence on these drugs, and the different forms this dependence can take. To put this study in context, some of the recent literature on psychotropic drug use is reviewed, before reporting the findings of the pilot-study. From this data a classification of chronic users into three different 'types'—called 'Tonic', 'Fuel' and 'Food'—has been developed, each of which embodies a different perspective on psychotropic drugs, their symbolic meanings, and modes of usage. It is hoped this classification will be useful to clinicians and others working in this field.

THE GROWTH OF PSYCHOTROPIC DRUG PRESCRIBING

Psychotropic drugs have become a familiar feature of modern life, especially in the industrialised world. The prescribing—and ingestion—of these 'chemical comforters' [1] or 'pills for personal problems' [2] has become a widespread and socially acceptable habit. Society, in Warburton's view [3] is in danger of becoming a 'pharmacotopia', where 'chemical coping' [4] becomes a predominant way of dealing with the problems of everyday life.

Several studies have shown the progressive rise in the prescribing of psychotropics, particularly in the past 20 years. In Britain, for example, from 1965 to 1970, prescriptions for tranquillizers increased by 59% and non-barbiturate hypnotics by 145% [5]. In 1972 45.3 million prescriptions for psychotropics were issued by National Health Service general practitioners in England alone (17.7% of the total number of prescriptions), at a cost of £23.8 million [6]; of the more than 46 million psychotropic prescriptions issued the following year, 13.6 million were for benzodiazepines [7]. Dunlop [8] estimated that every tenth night of sleep in England was induced by a hypnotic drug, and that in any 1 year 19% of British women and 7% of men were prescribed a tranquillizer, while Tyrer [9] estimates that more patients in Britain take tranquillizers regularly for over a month than in any other Western country. In Canada, Sellers [10] estimates that 1 in 10 Canadians receive a prescription for a benzodiazepine each year, and more than 30% of hospitalized patients are given these. In the United States, an estimated 250 million prescriptions for psychotropics are issued annually [11]; the most commonly prescribed drugs in the U.S.A. are the benzodiazepines [12], and in 1973 it was estimated that prescriptions for one of these, diazepam (Valium), was increasing at the rate of 7 million annually [13]. Valium is now reported to be the most widely prescribed drug in the world [14]. In Britain, three of the benzodiazepines, introduced in the early 1960's, have accounted for the majority of the increased prescribing;

diazepam (Valium), nitrazepam (Mogadon) and chlordiazepoxide (Librium) [15].

Many reasons have been advanced to explain this increase in prescribing. Blame has been laid at several doors, including that of: *doctors*, and particularly the 'mix of influences' on them such as advertising and societal expectations [16], rushed consultation times and increased workload [17], increased delegation of repeat prescribing to receptionists [18], alleged limited ability to deal with emotional problems of patients in a non-pharmacological way [19], their need to exercise moral authority over patients [20], and give a visible token of this relationship [21], and their acquired 'habits' of prescribing [22]; the *patients*, and their demands for anti-anxiety and sleeping pills [23], and expectations of these drugs [24], their belief in the 'chemical road to success' [25], their 'fashions' of drug ingestion [26], lowered tolerance to emotional distress [27] and need for a token of the doctor's interest in them [28]; the *pharmaceutical industry*, and the impact of its advertising on the medical profession [29], and on the public [30] in promoting the necessity for, and efficacy of, 'pills for personal problems'; and *socio-cultural factors*, including the competitiveness of modern life [31], effects of social and demographic change [32], free availability of health care under the National Health Service in Britain [33], 'stress' of daily life, especially role stresses in women [34], a lowered threshold of physical and psychological pain [35], excessive faith in science and technology in dealing with personal problems [36], the 'medicalisation' of everyday life [37], and cultural beliefs about sleep and its necessity for health [38].

Most authors on the subject agree that there are dangers in this increased prescribing. The benzodiazepines, in particular, are considered to be over-used or mis-used [39], especially the hypnotics [40]. Although some of them are marketed as minor tranquillizers, and others as 'sleeping tablets', their effects are similar, and there is little to choose between them [41]. Numerous of their side-effects have been reported [42], both physical and psychological [43].

In particular, there is a tendency to cause psychological dependence on them [44], and this can occur at virtually any dose [45], and after only a short exposure [46].

This paper is primarily an enquiry into the nature of this psychological dependence, and the many dimensions of meaning these drugs have for those who use them on a long-term basis.

PSYCHOLOGICAL DEPENDENCE ON DRUGS

Lader [47] has provided a useful definition of psychological dependence, as:

the need the patient experiences for the psychological effects of a drug. This need can be of two types. The patient may crave the drug-produced symptoms or changes in mood—a feeling of euphoria or a lessening of tension, for example. Or the patient may take the drug to stave off the symptoms of withdrawal.

This dependence is sometimes, though not always, associated with drug tolerance; i.e. "the need to increase the dosage of a drug in order to maintain its therapeutic effect" [48]. True physical dependence, or addiction, is more likely to be associated with tolerance, and with severe physical and psychological withdrawal symptoms [49]. However, as Claridge [50] points out, the distinction between psychological and physical dependence may be more theoretical than real. Physical addiction, for example to narcotics, is just one end of a continuum of drug-taking, with more socially acceptable 'chemical comforters' such as alcohol, tobacco, coffee, and 'tonics' at the other end [51]—a similar point to that made by Peele [52]. Peele sees addiction as an extension of ordinary behaviour, 'a pathological habit' or compulsion; while Stepney [53] sees 'drug-based habits' such as drug dependence and addiction as having a 'family resemblance' to other forms of repetitive and engrossing behaviour with similar psychological functions; These non-pharmacological habits include food-based habits (e.g. overeating, tea drinking); oral-manipulative habits such as smoking, nail-biting, thumb-sucking; social habits and rituals, including gambling and games; thrill-seeking habits, and certain hobbies. In practice these tend to overlap, but they all share the characteristics of escapism, instantaneous gratification, development of some degree of tolerance, and symptoms of withdrawal.

Both personality and socio-cultural factors are as important as the pharmacology of the drug, in both psychological dependence and addiction [54]. Several studies have shown the importance of the socio-cultural matrix of drug users, even if they are physically addicted. Peele [55] quotes the radical drop in the number of U.S. soldiers addicted to heroin, once they returned from Vietnam to the context of civilian life. Jackson [56] reports a case from St Louis in the 1960's where the life-style and behaviour of heroin addicts remained unchanged when the supply of heroin dried up, and was replaced by methamphetamine—whose pharmacological action is opposite to that of heroin. The effect of any drug is influenced by a variety of non-pharmacological factors, including the colour and appearance of the drug itself [57], the standing of the prescriber, the personality of the per-

son taking it, and the setting in which it is taken. As Claridge puts it:

The subject's... attitude towards and knowledge of drugs, what he has been told about the particular drug he is taking, and the setting in which it is given, will all contribute to the total drug effect [58].

There has been speculation as to the attributes of personalities most likely to become psychologically dependent on or addicted to drugs, though no clear picture has emerged. Among the cluster of personality traits isolated are: over-anxiety, emotional dependency and immaturity, and hypochondriasis [59]; a painful consciousness of life, with low self-esteem, a sense of inadequacy, and poor personal relationships [60]; and a tendency to depression with anxiety [61].

The importance of both personality and socio-cultural factors is clearly seen in the case of *placebos*, or pharmacologically-inactive preparations. These can cause a wide variety of physical and psychological changes [62], including side-effects such as drowsiness [63], as well as psychological dependence on them [64]. In Britain there is a long history of self-medication with placebos such as 'bitters' and 'tonics' [65], as well as 'nerve tonics' and 'elixirs of life' [66].

SYMBOLISM OF DRUG PRESCRIBING AND INGESTION

In Joyce's view [67] there is a strong symbolic, or placebo element in virtually all drugs prescribed by doctors—even if they are pharmacologically active preparations. He estimates that nearly 1 in 5 of all prescriptions written by general practitioners in Britain are for their symbolic functions; that there are about 500,000 people in the United Kingdom who each year are 'symbol-dependent' patients; and that any drug given for more than 2 years has a large symbolic component. Psychological dependence on this symbolic function is particularly important in the case of psychotropics, all of whom can be regarded as drugs of dependence [68]. According to Tyrer [69], dependence is more likely when fixed dosage regimes are followed for long periods. Parish [70] has shown in his Birmingham study (1971), that 14.9% of patients surveyed had taken psychotropic drugs continuously for one year or more, and 4.9% for 5 years or more. Yet Williams [71] quotes studies showing that most hypnotics lose their sleep-promoting properties within 3–14 days of continuous use by the patient, and that there was little convincing evidence that benzodiazepines were efficacious in the treatment of anxiety after 4 months continuous treatment; i.e. with long-term use, the pharmacological element in the effect of these drugs declines, to be replaced by a largely symbolic element—particularly if the drug has been used in a fixed, regular, 'habit-type' regimen [72].

The prescribing and ingestion of drugs is imbedded in a matrix of cultural values and assumptions. Unlike in some non Western societies (and in hospital medicine, here in the West) where healing frequently takes place in a public setting, drug treatment in general practice has two distinct phases (a) the *public* domain, or act of prescribing, and (b) the *private* domain of drug ingestion, self-medication, and com-

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pliance with the doctor's instructions. Both domains have strong symbolic elements.

Pellegrino [73] sees three interacting levels of symbolism: that of the act of chemical ingestion itself; its enhancement by the fact of illness; and the potent investiture of this symbolism by the doctor's act of prescribing. Both prescription and drug can be viewed as what Turner [74] calls 'multi-vocal' symbols; i.e. representing many things at the same time. In the case of the *prescribing* act, the prescription has both 'manifest' and 'latent' functions; this has been described by several authors, including Lennard and Cooperstock [75], Smith [76], Balint [77] and Pfefferbaum [78]. Among 'manifest' functions of the prescription, Smith mentions: a method of therapy, of communication, of medical control, and of clinical trial. He lists 27 possible latent functions of the prescription [79], including: as symbols of the doctor's power, and the power of technology, the legitimization of long-term illness, an indication of the doctor's concern, and a way of terminating the consultation. Balint has also described latent functions of the prescription, in particular the placebo function of the consultation itself, where the doctor himself becomes a form of 'drug'. Hall [80] also focuses on this relationship and sees prescribing as a form of 'social exchange'.

After being issued a prescription, the patient enters the private domain of drug *ingestion*, equivalent to a form of self-medication. In a middle-class Western setting, this is the domain of privacy, autonomy and choice. Here, as Stimson [81] has shown, the patient "has the potential for considerable autonomy" in deciding whether, or how, to comply with the doctor's instructions. He estimates 'non-compliance' in this domain at about 30% and notes that patients make decisions whether to take prescribed drugs or not, based on their lay theories of how the drugs work, their effectiveness and dangers, and their own previous experience of them. Joyce [82] has noted that an individual's experiences with a drug, for example a psychotropic, have cumulative effects, so that people who have had one favourable outcome from the drug will probably experience a similar outcome on subsequent occasions, and this is particularly important in the development of psychological dependence.

This study deals with the symbolic significance of psychotropic drugs to a group of long-term users of these preparations; in particular, the part played by these drugs in their daily lives and social relationships.

RESEARCH SETTING AND METHODS

The survey was essentially a pilot-study, designed to collect both qualitative and quantitative data and to formulate concepts which would then be evaluated in a second, larger survey. It was carried out in Edgware and Stanmore, Middlesex, two adjacent middle-class suburbs on the outskirts of London. 50 patients were interviewed, each of whom had been receiving repeat prescriptions for one of the benzodiazepines [83] for at least 6 months prior to the date of the interview. They were randomly selected from among all patients who satisfied these criteria, and who attended their National Health Service general practitioners on selected days during a 6-month period in

1979. They were interviewed with their permission, and that of their GP's. It was stressed that their comments would remain anonymous, and would not affect their treatment in any way. The interviews were semi-structured and open-ended, and conducted in an informal atmosphere. Replies and comments were entered on a standardised questionnaire. One aspect of the methodology requires comment: the patients interviewed knew I was a doctor (though not their own), as well as a social anthropologist, and this may have influenced their replies—though the extent of this influence is impossible to assess. Given this, some of the replies may provide interesting data on what Lader calls 'drug-seeking behaviour' [84]; i.e. the steps taken by the psychologically-dependent patient to ensure supplies of the appropriate drug, in this case by the form of self-description given by patient to doctor. Stimson and Webb [85] have noted how patients select and order the information they give to the doctor, in order to influence the outcome of the consultation, and this may also have an effect on the collection of data in a social science setting.

The patient sample are shown in Table 1: only 9 were in full-time employment at the time of the survey, the other 41 described themselves as 'retired' or 'housewife' [86]. The average age of the sample was over 60 years. In this survey, as in others, women predominated. Women in Britain are prescribed psychotropics twice as frequently as men; e.g. in Parish's study [87] the female: male ratio for all psychotropics was 2.14:1, that of tranquillizers was 2.1:1, and non-barbiturate hypnotics 1.8:1. In addition, psychotropic drugs were prescribed more for patients 45 years of age or more, and especially elderly bereaved widows [88].

The questionnaire dealt with the perceived effects of psychotropic drugs on the individual, and on their social relationships and self-image; the social context of psychotropic drug use; and patients' attitudes to 'drugs' in general.

THE EFFECTS OF PSYCHOTROPIC DRUGS ON THE INDIVIDUAL

The sample were asked why they thought they had been prescribed the psychotropic, why they had continued to take it, what effects they noticed on themselves after taking it, and what they would do if it was withdrawn or unobtainable. The original reason for it being prescribed seemed less important than why it was being taken now; e.g. one patient, apparently prescribed Librium after a bereavement 8 years previously was still getting repeat prescriptions for them in order "to help me unwind". Another, prescribed Mogadon 5 years ago in hospital for 'insomnia' after an eye operation, was still taking it regularly for the same symptom.

The stated reason for taking the drug now, i.e. the current 'problem' perceived by the patients as requiring psychotropic medication—as well as the perceived effects of the drug on them after ingestion—is shown in Tables 2 and 3.

Almost half the sample were taking their drug for 'insomnia', and 19 for symptoms of 'tension', 'anxiety', or physical symptoms associated with these states such as 'a tight stomach', 'a bumping heart'. The point

Table 1. The patient sample

Age (years)	Sex			Marital Status		Children	
	No. %	Male No. %	Female No. %	Total	No. %	No.	No. %
20-39	—	4 (8)	4 (8)	Married	33 (66)	0	11 (22)
40-59	3 (6)	6 (12)	9 (18)	Widowed	10 (20)	1	16 (32)
60+	7 (14)	30 (60)	37 (74)	Single	5 (10)	2	16 (32)
Total	10 (20)	40 (80)	50 (100)	Divorced	2 (4)	3	5 (10)
						4	2 (4)

Table 2. Why the drug is currently being taken (N=50)

	No. (%)
Insomnia, 'sleeplessness'	23 (46)
'Nerves', tension, anxiety	19 (38)
Depression, 'feeling low'	5 (10)
'A nervous breakdown'	3 (6)

Table 3. Perceived effects of the drug on the individual after ingestion (N=50)

	No. (%)
No perceived effect	20 (40)
Improvement in mental state	17 (34)
Fall asleep	13 (26)

at which patients define sleeping problems and subjective emotional states as being 'abnormal', and thus constituting an 'illness' depends, as Kleinman [89] has noted, on personal, social, and cultural factors; and these factors may in turn shape both the perception of symptoms, and how they are described to others. The part played by ethno-religious variables in defining behaviour and subjective states as 'illness' has been noted by Gutmacher and Elinson [90], and others. Cultural beliefs about the nature of sleep, what constitutes 'normal' sleep, as well as whether 'bad thoughts or memories' occurring at night are 'normal', all have an important influence. Dunnell and Cartwright [91] found that 29% of a patient population thought that doctors could 'cure' sleeplessness, while 63% believed they could be helped medically with this symptom. In the U.S.A., Solomons *et al.* [92] estimated that one third of Americans over 18 years of age perceive themselves as having had 'trouble sleeping' within a given year, but only 2% would define it as 'insomnia'. In this sample, 'thinking' and 'memories' occurring during the time culturally defined as 'sleeping time', were classified as an abnormal state requiring treatment: e.g.

It's a nice feeling—a block in my head and I can't think beyond it into my miserable thoughts. Something stops me thinking and then allows me to drift into sleep. (Without it) I'd lie awake, thinking about this or the other. I would lie awake from 4 to 7 o'clock and be thinking, worrying.

The effect of insomnia on one's personality the following day was also mentioned, e.g.

I fall into a deep natural sleep. I get a good long night's sleep, and wake up feeling normal.

If I get no sleep at all, I'm not well in the morning. I don't feel myself. Don't want to do anything, can't be bothered, fed up with myself.

In both these cases there is a subjective concept of what 'being normal' or 'being oneself' is like; part of this definition depends on the patient's interpretation of their own physical and emotional symptoms, and part on the interpretation of others. The possible origin of this self-concept will be discussed later on.

Patients did not differentiate between hypnotics and tranquillizers; all tablets taken at night—even tranquillizers such as Valium or Ativan—were defined as 'sleeping tablets'. It has been noted [93] that emotional states—in this case 'insomnia'—tend to be named after the presumed actions of the drugs available to treat them. The prescription of a drug to be taken at bedtime may therefore help define the problem as 'a sleeping problem'; i.e. one of sleep-deficiency, rather than as a symptom of emotional unease. Similarly, tranquillizers ingested during the day help define the problem as 'nerves' or 'tension'.

34 patients did perceive some improvement in their mental state after ingestion of the drug; e.g.

If I get het up, it calms me. I feel calmer. I don't think it's imagination. It keeps me on the level.

If I'm in a panic I take it—I can feel the panic subsiding. I can sit still for longer.

The large number of patients (40%) in Table 3 who noticed no subjective change after ingesting the drug may reflect the development of tolerance, but they may also serve to confirm Joyce's contention of the symbolic-placebo aspect of drugs taken for a long period. Thirteen of these patients cast doubt on whether the drug actually had any pharmacological effect on them, and speculated that its effect was 'probably psychological' e.g.

It's probably psychological—I imagine that it's helping. I've got something behind me that will help—it's security.

I feel a little more confident. I don't know if it's that or me. Whether it was auto-suggestion or me—it calmed me. You become so reliant on them you feel it's doing you good—even if it isn't.

I don't know if it makes me relax or not. Having taken it my mind says 'I'm going to relax soon'. It's probably psychological.

I take 1 at night. It doesn't work any more. It's like a kind of prop—otherwise I think I won't fall asleep. I kid myself that I feel better with valium.

These answers suggest that Joyce's estimation of 2 years before a drug becomes largely symbolic in effect, may be an over-estimation. Seeing the drug's effect as 'probably psychological' may be a way of diminishing its effects and regaining a sense of autonomy; the patient's own mind, rather than the ingested chemical, becomes the therapeutic ally in improving his mental state.

The theme of the drug being 'a prop', 'a security', 'a helper' recurred several times; in some cases, especially elderly widows, the drug was viewed as almost anthropomorphic in nature; a 'someone' rather than a 'something': e.g.

I'd be terrified at night all alone—if I didn't have something to fall back upon.

I take one at night—it's if you're alone, you see.

In this sense, a socially-isolated individual's relationship with their drug may have symbolic components which are unrelated to its pharmacology.

Side-effects from the drugs were reported by 10 patients, and included nightmares, depression, and impotence—though they continued asking for repeat prescriptions. 39 patients reported no side-effects, and one was unsure. Emotional side-effects from the drugs, e.g. depression, were seen as different in quality from the identical symptoms occurring without therapy, and did not seem to require treatment.

One aspect of the survey dealt with patient's beliefs about what they would do—or would have done—if their drug was unobtainable or withdrawn, or had never been invented. The results are shown in Table 4.

The 18 patients who would have turned to another 'drug'—either self-prescribed or from a doctor—reveal the widespread popular belief in 'chemical comforters'. The self-prescribed drugs here included 'Aspirin', 'Aspro', 'Paracetamol', 'Panadol', 'Veganin' and 'Metatone'. Significantly, all except the last one are analgesics and easily available at any pharmacy. The question arises whether patients are linking physical with psychological 'pain'. Peele [94] sees addiction as "a pain-relieving experience", whatever the source of the pain, and notes that "a painful consciousness of life characterizes the outlooks and personalities of addicts". My hypothesis is that, in addition to their easy availability, analgesics may be used for emotional distress because of the experience of these drugs as having relieved physical pain. Jefferys' study of self-

medication on a working-class estate [95], also showed the widespread use of 'Aspirins' for 'nerves', 'sleeplessness', and other mental disorders, particularly by women. Her study showed that self-medication was twice as common as the ingestion of prescribed drugs, though often the two were taken together. Patients' use of self-medication may be a way of expressing their autonomy *vis-à-vis* the medical profession, but the continued demand for prescribed psychotropics in addition seems to confirm the views of Balint, Pellegrino and others that the act of prescribing itself has important symbolic components. Self-medication for emotional problems has a long genealogy in Britain: opiates and alcohol have been used for centuries, by both men and women. Gin, known as 'mother's ruin', was commonly used by women in the 18th and 19th centuries, as was laudanum [96]. Several of these medications were pharmacologically inactive: 'paregoric', a common domestic remedy, allegedly a tincture of opium, was found to contain no opium in an inquiry in 1880 [97]. In 1912 the British Medical Association investigated dozens of patent 'nerve tonics', 'restoratives' and 'elixirs of life', and found that hardly any contained any active ingredients [98]. In 1968, 23.5 million prescriptions for 'tonics, iron and vitamins' were dispensed, all of whom have a largely placebo effect [99]. In 1975 these 'bitters' and 'tonics' cost the N.H.S. £497,000 [100]. The belief in 'chemical comforters' is a widespread cultural assumption, and this belief is often unrelated to the pharmacology of the ingested chemical.

Those patients in the sample who would not have turned to 'drugs', reported a continuum of likely outcomes, from 'coping' to 'breakdown'; e.g.

It wouldn't really worry me—I would cope.

I would just have gone on trembling.

I would have been in a mental home for the rest of my life.

ARE PSYCHOTROPICS 'DRUGS'?

While self-medication is common, the preparations taken are not regarded as 'drugs'. This word has a negative connotation, and most patients are against their use. They were asked about their general attitude to 'drugs' (Table 5) and whether what they had been prescribed, and were taking, was 'a drug' (Table 6); if it was a drug, what type it was; and if not, what they thought it was.

Most of the sample were against 'drug-taking' and 'drugs', presumably associating the latter with narcotic abuse. However, 41 patients admitted that their medication was in fact 'a drug'; they qualified their moral disapproval by pointing out that they were an unfortunate but necessary evil, and—for them—there did not seem to be any other alternative; e.g.

It drugs you off to sleep. They do people a lot of harm. If only there was something else in place of drugs.

I don't like to take them, but I just have to.

I'm against it basically. If you can do without it you're lucky.

I don't like it—but I'm grateful it's there.

Table 4. Patients' strategies if drug were withdrawn or unobtainable (N=50)

	No. (%)
Taken another 'drug'	18 (36)
Done without and coped well	14 (28)
Don't know	8 (16)
Continued with symptoms as before	5 (10)
Suffered a 'breakdown'	3 (6)
Seen a psychologist	1 (2)
Gone on a 'nature cure'	1 (2)

Table 5. General attitude to 'drugs' (N=50)

	No. (%)
Against	34 (68)
In favour	15 (30)
Don't know	1 (2)

Table 6. Whether the prescribed medication is 'a drug' or not (N=50)

	No. (%)
Is a drug	41 (84)
Is not a drug	8 (16)
Don't know	1 (2)

In some cases, the responsibility for the patient being on drugs was put solely on the doctor: e.g.

It's necessary if the doctor prescribed it. If the doctor prescribes it, I *must* need it.

If it's necessary then you take them—if it's treatment by a doctor.

I'm not against drugs—I take whatever I'm given to swallow.

The moral disapproval of 'drugs' in general, was based on two lay uses of the word 'drug'; i.e. something over which one has no control, and which involves a loss of personal autonomy and choice; and something which greatly alters the level of consciousness, to a degree where one can no longer function in daily life; e.g.

It's not a drug—if you took more of it, it might become a drug.

It doesn't drug me—I keep on the go.

Jones [101] has pointed out that patients differentiate between 'medicine' as something that makes them better, while 'drug' has more sinister implications. In his study, over 80% of patients agreed that heroin was a drug, but only half classified morphine, sleeping tablets and tranquillizers as drugs, while only one third saw aspirin as a drug. The sinister implications in the word 'drug' are particularly those of loss of autonomy, choice, and self-control. Although many of the patients in my sample were psychologically dependent on psychotropics, how they conceptualised this dependence left some room for their own sense of autonomy and self-control, and to do this they tended to diminish the chemical power of 'their drug', as opposed to the 'hard' variety; e.g.

It's a little bit of help—not a powerful drug.

It's soft, sweet—it's different—it's softer (than other drugs).

It's just a calmer, a help—I can cut it off when I want to.

It's not a drug—merely a thing for sleeping.

It's sort of—just a medium drug—a mild sleeping one.

It's a harmless one.

THE SOCIAL CONTEXT OF PSYCHOTROPIC DRUG USE

Stimson and Webb [102] have noted the importance of friendship and family networks in exchanging ideas and information about drugs, both prescribed and non-prescribed. Blum [103] has mentioned the importance of family attitudes in learning about drugs, and their expected effects; The setting in which any drug is ingested can have an important influence on its effect [104]. The patients in this sample were part of social networks that knew of their taking the drug, in general approved of it, and were often taking the same drug themselves. The survey dealt only with knowledge of the *same* drug used by others; presumably a larger number were using other psychotropic drugs as well. The sample were questioned about who knew they were taking, say Valium, and whom they themselves knew to be taking that same drug. Their social networks included friends, relatives, spouses, neighbours, or workmates; [105] the results are shown in Tables 7 and 8.

The fact of taking the same prescribed drugs can create a bond between people; similar to what Turner terms "a community of suffering"; e.g.

All my friends are on Valium.

All the widows are taking something.

Nearly everyone I know (is taking Valium).

In 7 cases, both spouses were taking the same psychotropic drug; an impression gained was some of these relationships might be termed 'chemical marriages'—where the marriage is only maintained by frequent ingestion of a psychotropic drug by both partners. Knowledge of psychotropic drugs is widely shared within a family, though not always: e.g.

"I'm ashamed to tell anyone that I'm taking a bit of drug."

In some cases the family may provide the cue for the patient to take the drug; e.g.

"If I'm tensed up—my husband will say 'Take a Librium!'."

As Claridge [106] has noted, the perception of how others are reacting to oneself can influence the effect of drug once it has been ingested. Psychotropic drug use by the patients also took place in an atmosphere of tolerance or neutrality. Only 9 patients reported some disapproval by others of their taking the drug, 10 reported approval, 29 said that those who knew did not care either way, and 2 were not sure. The majority of these patients' social contacts, then, did not regard long-term usage of psychotropic drugs as markedly 'abnormal' or morally undesirable, and so to a large extent saw them as socially harmless. This atmosphere also makes possible 'fashions in drug-taking and the exchanging and sharing of drugs within a social network; patients who have accumulated a large store of drugs may act as what Hindmarch [107] calls 'over-the-fence physicians' to family, friends and neighbours. In this survey, only 12% of the patients admitted to this, but in Warburton's study [108], 68% of young adults interviewed admitted receiving psychotropics from friends or relatives. A large number of drugs prescribed regularly are

Table 7. Knowledge of another person taking the same drug (N=50)

	No. (%)
Yes	36 (72)
No	14 (28)

Table 8. Patient known by others to be taking the drug (N=50)

	No. (%)
Yes	44 (88)
No	6 (12)

never or seldom ingested, and tend to be stored at home [109], while one survey showed that 27% of British homes had some psychoactive drug in them [110]. Not only is information about psychotropics shared within a social network, but the drugs themselves may be shared; in that case, there is a reversal of roles and the 'patient' now becomes the 'prescriber'.

SOCIAL RELATIONSHIPS, SELF-IMAGE, AND PSYCHOTROPIC DRUG USE

An important aspect of psychotropic drug use is the role these drugs are believed to play in maintaining, or improving, relationships with others—particularly within the family. Both aspects of Lader's definition of psychological dependence [111] are relevant here: firstly, the believed positive effects of the drug in maintaining or improving existing relationships and secondly, the fear of what would happen if the drug were withdrawn, or unobtainable. The sample were asked the supposed effects of the drug on their relationships, and what they imagined would happen if the drugs were not available. The results are shown in Table 9.

These results reveal that, for some patients at least, the drug—or its withdrawal—had a definite impact on their social relationships. This impact was an indirect one—the result of changes in the patient's own emotional state, which would then have an effect on other people; i.e. for some patients the drug was taken as much for the benefit of others, as for their own benefit.

Thirteen of the patients saw some good effect on their relationships from the drug, while none saw any good effect resulting from its withdrawal. A total of 26 patients saw some bad effect arising from its withdrawal, usually as a result of a change in their own emotional state. Significantly, 15 patients—who noticed no effect of the drug on their relationships, did feel that these relationships would suffer if the drug were withdrawn; i.e. without it they would be in a form of 'psychotropic-deficiency state'. They could only be returned to normal social functioning, and a sense of completeness, if the drug were obtainable again—much like the diabetic who can only function normally with the aid of injected insulin. The relationship between this sense of social inadequacy and

'incompleteness' without the drug, and the fact that a large proportion of those on long-term psychotropic therapy are elderly widows [112] who are, in a sense, socially 'incomplete'—needs to be explored in further research projects.

A total of 19 patients in the sample perceived *no* effects, either positive or negative, of the drug on their social lives. In this group, presumably, the perceived site of the drug's effect was on the patient himself, and was taken for their benefit rather than for the benefit of others.

Those patients who saw the drug as necessary for the maintenance of their social relationships, tended to view the drug as helping them conform to an idealised, normative model of behaviour. This model was essentially a static one, and the only element within it that could be changed were the patient's emotional reaction to their life situation; e.g.

If I could send the 4 children away I might learn to cope (without the drug)—otherwise it would be impossible.

These patients' self-images included a wide variety of negative personality attributes that could only be minimised or cancelled out by, in a sense, 'titrating' the drug against them. Without the drug's aid the patient is 'incomplete', the negative personality traits predominate, and he or she cannot conform to the idealised model of 'normal' behaviour. Aspects of behaviour in relation to others—particularly family members—that were believed by patients to be linked to psychotropic drug ingestion, are shown in Table 10.

In the above cases, the psychotropic drug can be conceptualised as a 'fuel' without which the patient's social persona would not function. This concept of the personality requiring the aid of technology—in this case a psychotropic drug—in order to function adequately, is similar to the 'human beings as machines' metaphor, which Lennard and Cooperstock (113) see as becoming increasingly pervasive in the modern world.

LEARNT ASPECTS OF PSYCHOTROPIC DRUG USE

Blum [114] has pointed out the 'learning model' aspect of drug use, whereby people acquire knowledge as to what drugs to use, and when, and what sorts of responses are to be expected. Parish [115] has suggested that in prescribing psychotropic drugs for personal problems, doctors are communicating a model of how to deal with these problems—not by confronting them, but by ingestion of the drug; a point illustrated in Table 10. Trethowan [116], a psychiatrist, points out that this strategy is a 'non-solution'; anxiety can be biologically purposive, and merely suppressing it chemically may undermine the patient's motivation to confront and deal with, the anxiety-provoking situation. In addition, patients can acquire a taste for what Watts [117] calls 'this artificial tranquillity'—for a life theoretically free of interpersonal problems, 'bad thoughts' and 'bad memories'. Patients on long-term psychotropic treatment can also learn emotional dependency on the doctor—what Pfefferbaum terms the 'negative pla-

Table 9. Believed effects of drug, or its withdrawal, on sample's social relationships (N=50)

		Effect of drug on relationships			Total & (%)
		No effect	Good effect	Bad effect	
Effect of withdrawal of drug on relationships	No effect	19	2	—	21 (42)
	Good effect	—	—	—	—
	Bad effect	15	10	1	26 (52)
	Don't know	2	1	—	3 (6)
Total & (%)		36 (72)	13 (26)	1 (2)	50 (100)

cebo effect' [118]—as well as a new self-image; i.e. a sense of personal unworthiness and 'incompleteness', that can only be corrected by the addition of the drug which 'completes' them. Six patients in this survey

Table 10. The normative model: aspects of behaviour in relation to others affected by psychotropic drugs or their withdrawal

1. *Being 'Normal'*
e.g. "Now I feel normal all the time. I don't go off the handle so easily. I'm not so excited, angry, irritable."
"Without it I couldn't lead a normal life."
(Without it) "I'd not be doing the normal things I should have done."
2. *Being 'Oneself'*
e.g. "If I don't have it (Mogadon) I don't feel myself. I don't want to do anything."
(With it) "It's nice—I feel just myself."
3. *Self-control*
e.g. "If people can't control their emotions, then they need them—like some women."
(Without them) "I might not be responsible for what I'd do. I could not cope."
4. *Even-tempered*
e.g. (Without it) "it'd make me uptight, irritable, snappy."
(Without it) "I'd be nervy, impatient with other people."
5. *Good to live with*
e.g. (Without it) "I'd be nasty, jumpy, not nice to live with."
(Without it) "I'd be difficult to live with—nasty tempered."
(Without it) "I'd be less patient with the family."
(Without it) "I'd be miserable—take it out on the family."
6. *Nurturing (to family)*
e.g. (Without it) "I couldn't help those I love."
7. *Non-complaining*
e.g. (Without it) "I'd be all groans and moans."
8. *Sociable*
e.g. (Without it) "I wouldn't want to see people."
(With it) "I'm friendly—I can associate with people."
(Without it) "I'm morose—don't want to talk—with-drawn."
"If I'm calmer, I feel more confident, especially with strangers. I feel confident on Valium."
9. *Assertive*
e.g. (With it) "I'm more assertive—I get the feeling I don't care—to hell with everybody!"

referred to this learnt aspect of psychotropic drug use: e.g.

If it had never been invented—I wouldn't have had the experience of relying on them.

(Without the sleeping tablet) I'd have probably banked on getting catnaps during the day—if one's never heard of a thing, one doesn't miss it.

If I didn't know of it—there would have been nothing I could do about it—I would think 'I'm a miserable so-and-so and I'm stuck with it!'

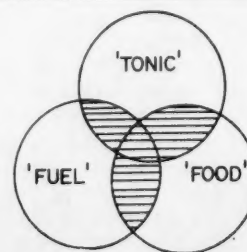
(If it had not been prescribed) I would never have known about it—you would have to rely on yourself.

A CLASSIFICATION OF PSYCHOTROPIC DRUG USERS

Although this pilot-study was based on a small and not necessarily representative sample, it is possible to see that long-term users of psychotropic drugs are not a homogeneous group. They differ from one another not only in age, sex, background, and other demographic variables—but also in terms of their attitudes towards the drugs and their usage, as well as the *symbolic* role these drugs appear to play in their daily lives and relationships. This role, as reported by the sample, may be an aspect of their 'drug-seeking behaviour', but is still of crucial importance in psychological dependence.

The hypothesis is that long-term users of psychotropics can be classified into three main groups—called 'Tonic', 'Food' and 'Fuel'—and that each of these groupings represents a different conceptualisation of psychotropic drugs and their use. These three 'types' are *not* discrete groups, but rather clusters of attributes which overlap to some extent, so that no

Table 11. A classification of long-term psychotropic drug users



one individual would usually have *all* the attributes of his particular group. This is shown schematically in Table 11.

These groups are based on patients' stated beliefs about, and expectations of, their psychotropic drug. However—in further research projects—they need to be related to patients' actual health behaviour, as independently observed, as well as to a variety of demographic variables including age, sex, marital status and ethnicity, and also trends in the consumption of tobacco, alcohol and other 'chemical comforters'. From this survey, though, the classification is based on the following criteria:

1. The degree of perceived *control* by the patient over the drug—under what circumstances, in what manner, and how frequently it should be ingested. On this basis, patients can be placed on a continuum of perceived control; i.e.

Minimum control-----Maximum control
(‘Food’) (‘Fuel’) (‘Tonic’)

2. The perceived *site of action* of the drug—whether primarily on the patient, their social relationships, or on both; i.e.

Patient-----Others
↑ (‘Tonic’) ↑ (‘Food’) ↑ (‘Fuel’)

↑ = perceived site of maximum effect.

3. Beliefs about the nature of the *effects* of the drug—or its withdrawal—on the patient's subjective emotional state, and social relationships.

4. Beliefs about the nature of ‘drugs’ in general, and their own prescribed drug in particular.

5. ‘Habit’ aspects of daily life (cf. Stepney (53)); i.e. whether the patient is subject to other fixed daily rituals or habits, whether pharmacological or not.

These three hypothetical types of chronic users are described below, with examples.

‘TONIC’

Patients classified as ‘Tonic’ (17 patients) in this sample, express maximum control over the drug, its dosage, and when it is to be used (“I can cut it off when I want to”, “I am sufficiently strong willed to overcome it.”). They use the drugs more as a form of *self-medication* when required, rather than on a regular basis. Using the drug in this flexible way they represent what Stimson [119] calls ‘the patient as decision making individual’, and have a sense of autonomy and choice in relation to how the drug should be used. Despite their less frequent use, they still continued to be prescribed regular supplies of psychotropics by their general practitioners. They placed the site of action of the drug on themselves, rather than on their relationships; these relationships were not affected either by the drug, or its withdrawal (see Table 9). They were more likely to describe the drugs effects as ‘probably psychological’, and to diminish the drug's pharmacological power (“it's a small help”, “it's not addictive—it serves a purpose”, “it's only a

mild form”). They tended to be more ‘anti-drug than other groups (“It's a vice—there's too much drug-taking around”, “It's awful”, “It's not a good thing.”). They tended to stress the value of autonomy, choice, and self-control. Five of the men in the sample fell in this group. The use of the drug was episodic, and usually for a short period only; during that time it was used as a temporary ‘tonic’, ‘stimulant’ or ‘a thing for sleeping.’ The subjective emotional states classified here as ‘illness’ and therefore requiring treatment, were temporary feelings of anxiety or tension, or a sense of ‘feeling low’—what Pellegrino [120] would term ‘loss of soul’—i.e. ‘of vitality, pep, spirit’. These latter symptoms were frequently treated by patent ‘Nerve Tonics’, ‘Restoratives’, and ‘Elixirs of Life’ [121] before psychotropic drugs became easily available.

Mr A is a Company Director. He is aged 56, is married and has 2 children. He has been on Valium for 3 years for ‘tension’ and following a ‘mild coronary’. He describes himself as ‘just a mild taker’, and stresses that he takes Valium “only when necessary” when he needs to relax a bit and get some sleep. His wife was also taking Valium. He felt that without the drug he “wouldn't really worry” and he could cope well with his everyday life, though it would “take longer to fall asleep”. Neither Valium, nor its withdrawal, would have any effect—he said—on his relationships with others. He was against “drugs” in general, though felt that some people needed them: “If people can't control their emotions, they need them—like some women.”

‘FUEL’

Twenty-two of the patients could be fitted into this grouping, 5 of them men. They expressed a variable degree of control over their medication, a few speculating that its effect was only ‘a habit’ and ‘probably psychological’. Nevertheless, the drug played an important and constant part in their daily lives; its maximum effect being on their relationships with others (Tables 9 and 10). These relationships were affected indirectly by the effect of the drug, or its withdrawal, on the patients' subjective emotional state. The drug can be conceptualised as a ‘fuel’, without which the patient's personality would not disintegrate but would just not *function* in conformity with familial and social expectations (Table 10). This ‘functional’ definition of ‘normality’ or ‘health’ has been noted in other studies; e.g. Blaxter and Paterson [122] studied health beliefs and behaviour of working-class women in Aberdeen; in many cases ‘health’ was defined in a functional sense—the ability to ‘carry on’ with work and social obligations, despite feeling subjectively ‘ill’. In the ‘fuel’ group, the drug was seen as an often essential constituent of the patients relationships, and its ingestion a way of maintaining or improving these relationships. This may also apply, as Balint has suggested, to the maintenance of their relationship with the doctor. Using the drug as a ‘fuel’ in order to function socially, also has other aspects: e.g. sharing responsibility with the drug for social successes (and failures); and being able to function socially, but still claim some of the benefits of the ‘sick role’. The groups beliefs about the desirability of ‘drugs’ varied from “I'm against them—but everyone needs a little bit of help” to “If they do you good—

take 'em.' In general drugs were viewed as 'a help'—a necessary element in the smooth running of social relationships and families. An impression gained was that this group were not as 'habit-prone' as the 'Food' group, though the drugs played as important a symbolic role in the lives of both groups; e.g.

Mrs B is a housewife, aged 70, with a grown-up daughter. She has been taking Mogadon "for years" for "insomnia and pain in the back". She takes 1 at night to fall asleep—"it smoothes me down—then I don't know anymore. I feel better in the mornings." It does not have any bad effects on her, but "if I have it with milk it makes me dream." She is worried about what would happen if the drug were not there—"I should just go on worrying about not sleeping"—and the effects of the lack of sleep on the following day—"If I get no sleep at all, I'm not well in the morning. I don't feel myself. Don't want to do anything, can't be bothered, fed up with myself." Without the drug she gets 'bad-tempered' with her husband—very 'snappy' with him, and 'all groans and moans'. With the drug she is 'nice and calm' in relation to him. Both he and her daughter know of her taking the drug; he very much approves, though her daughter is against it. Without the drug she would have had to have "gone on a nature cure." She is not keen on taking the drug—"I don't like it—but I'm grateful it's there." A friend of her's is also taking Mogadon.

'FOOD'

This group contained 11 patients, all of them female and a higher proportion of elderly patients than the first two groups. They express least control over the drug, and its ingestion—and over their life generally; ("I take whatever I'm given to swallow."). This psychological dependence is as much on the medical profession, as on the prescribed drug. The drug is perceived as acting equally on both the patient's emotional state and their relationships; without it, both would disintegrate ("I would end up in a nerve hospital". "I would have been in a mental home for the rest of my life."). The drug is a 'food', in that without it the patient would not 'survive' as a sane, independent person; both personality and relationships would disintegrate if the drug were withdrawn ("If I don't get enough sleep I feel desperate—I'd be so exhausted I shall become stupid—unable to concentrate—forgetful—I'd lose control—I'd be irritable", "I'd go all haywire—worry about the least little thing", "I wouldn't want to see people—I'd feel stressed"). Their ingestion of drugs is at fixed times, and with an inflexible dosage—the opposite of the flexible and episodic use of these drugs by the 'Tonic' group. As this group are mostly elderly patients, especially elderly widows (see Parish (87)) who are socially 'incomplete', it can be hypothesised that they perceive the drug as something that 'completes' them, and enables them to survive— as 'a prop', 'a helper', 'a security'. In addition, elderly people tend to be more 'habit-prone'—i.e. to have more fixed daily habits and rituals; also, many of them are already the recipients of what might be termed 'medically-induced habits', i.e. the regular daily ingestion of such prescribed drugs as digitalis, diuretics, thyroid drugs, anti-diabetic drugs, pain-killers and so on. The question arises whether a person who is already socially isolated, 'habit-prone' by age, as well as taking other drugs on a fixed daily basis, is not particularly vulnerable to

becoming psychologically dependent on psychotropics and on their symbolic meanings.

Patients in this group, perhaps because of the curative effects of the other medicines they were taking, tended to be more 'pro-drug' than the other 2 groups (e.g. "They're very good—it calms a person down", "They help", "Drugs help people"). They did not try play down the effect of the drug on them.

If my hypothesis is correct, and psychotropic drugs in this group have become a symbolic form of 'food'—necessary for the patient's very survival (in a psychological sense)—then part of its symbolic power arises from what Pellegrino [123] terms the 'benediction' of the medical profession. This is reinforced every time the drug is prescribed—as is the link with the doctor, and with other members of the 'community of suffering'.

Not all members of this group, though, are elderly or single; e.g.

Mrs C is a 52-year old housewife, with 4 children, married to a bank manager. Both she and her husband are taking Dalmane for 'insomnia'. She has been on hypnotics for many years now, even though they give her "a bad taste in the mouth" and make her "tired all the time". She feels she cannot cope without them: "If I could send the 4 children away I might learn to cope—otherwise it would be impossible." Without it, she would have "a breakdown"— "I have an uncontrollable fear of a breakdown." The drug helps her relationships "because I sleep"; without it, they would suffer—i.e. "I'm irritable with the family. I can't cope, I don't want to cope. I can't keep still," and added "I think I'm unbearable to live with anyway." Her husband, children and friends all knew she was on Dalmane, but "got used to it". She thought that drugs were a good thing "if they are necessary" and if the person's state was "very bad". She thought Dalmane was "a tranquillizer—but I sincerely hope it's not a barbiturate." If it had never been invented "I probably would have had to get on with it".

CONCLUSIONS

The social and symbolic meanings of psychotropic drugs to a group of long-term users of these preparations, in 2 London suburbs, were examined in this pilot-study [124]. The emphasis in the study was on qualitative, rather than large-scale statistical data, in order to formulate concepts which would then be evaluated in subsequent and larger projects. The study reveals that psychotropic drugs can have many dimensions of meaning for those that use them: they can become incorporated into patients' self-images, and become an integral part of their social relationships. This helps explain the nature of their psychological dependence on these drugs. Also, chronic users of psychotropics are not a homogenous group; they perceive—and use—psychotropics in a variety of ways, and this has important clinical implications. Doctors who regularly issue these drugs to patients by 'repeat prescriptions' or 'refills'—without assessing how the drugs are perceived, or used, can do more harm than good; as well as their side-effects, and tendency to cause psychological dependence, they are often accumulated for exchanging with others, as well as for suicide attempts [125]. To show that these drugs can be perceived and used in different ways, rather than as a single category of consumption, I have described three models of psychotropic drug

use—as 'Tonic', 'Fuel' and 'Food' [126]—with some examples. To a large extent, *all* 'chemical comforters'—from coffee, alcohol, tobacco and 'vitamins' to more powerful psychotropic drugs—can be fitted into this classification.

Further study is needed to assess the predictive value of this classification in identifying patients most 'at risk' of becoming psychologically dependent on prescribed drugs, and also to relate these categories to tobacco and alcohol use, and to a larger number of social variables.

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126. The metaphor of 'Food' was first suggested by a patient who said of her diazepam (Valium): "But it's just like taking a biscuit with tea."

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RESEARCH NOTE

THE EDUCATIONAL VALUE OF PARTICIPATORY EVALUATION OF PRIMARY HEALTH CARE PROGRAMMES: AN EXPERIENCE WITH FOUR INDIGENOUS POPULATIONS IN ECUADOR

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Abstract—A seminar with basic health workers of four Indian groups in Ecuador serves as an example for the participatory evaluation of Primary Health Care (PHC)-programmes. Discussions in small groups, interpretation of visual aids derived from research data on health care utilization and practical evaluation exercises with the participants favoured the perception of opportunities and limitations which exist in the actual PHC-schemes. Main topics of discussion were: health impacts of socio-cultural change, community support of health workers, links with the hierarchy of the health care system, differential use of traditional and modern medicine, planification of future programmes. The final discussion with health officials was important for the mutual conscientization. The need for the involvement of communities and PHC-workers in the evaluation of regular programmes is stressed.

Evaluation of health programmes in developing countries is rarely done. This is particularly true for the Primary Health Care activities which have received enormous interest by international agencies in recent years [e.g. 12, 14].

We decided to use participatory evaluation of primary health care. This evaluation took the form of a seminar including Ecuadorian health authorities and Indian organizations in the Seminar Centre of the Federation of Shuar Indians (Federacion de Centros Shuar) in Sucua (East Ecuador). During a two week period (May 1980) about 60 participants from four Indian groups came together. Expenses were covered by the German Research Foundation.

THE PARTICIPANTS

These were representatives of Indian organizations, indigenous health workers, mestizo health workers, health officials at the national and provincial levels as well as 'rural doctors', i.e. young physicians in their compulsory year of rural service. The basic health workers were either health promoters ('promotores de salud', i.e. volunteers from the communities with a short term training and without remuneration), or health auxiliaries ('auxiliar de enfermeria' with a 7-12 months training and a full time employment). Promoters and auxiliaries work alone in health posts. Auxiliaries sometimes work with rural physicians in health subcentres. All of these were literate and most of them had finished Primary School. The average age was about 30 years. The majority was male, but one group from the highlands (Saraguro) had exclusively female members.

The following Indian groups were represented: *Shuar* (= Jivaros) from the South-East rain forest areas (Provincia de Morona Santiago—see [5]); *Indigenas*

del Napo (Quijos Quichua, Jumbos) from the North-East rain forest areas (Provincia del Napo); *Saraguro Quichuas* from the Southern Highlands (Provincia de Loja) and *Nabón-Quichuas* from a parish in the Southern Highlands (Provincia del Azuay).

OBJECTIVES AND TECHNIQUES OF THE SEMINAR

The main objectives of the seminar were:

1. To compare the different forms of primary health care
 - (a) health promoters only: Indigenas del Napo;
 - (b) health promoters and auxiliaries: Shuar;
 - (c) auxiliaries only: Saraguro;
 - (d) no program at all: Quichuas Nabón.
2. To evaluate some crucial aspects of basic health programmes in indigenous and non-indigenous communities.
3. To communicate research data from a health care utilization study [7, 8].
4. To use the evaluation for a re-formulation of local health plans.

The most efficient form of communication proved to be group discussions in small groups and afterwards panel discussions.

On some occasions data presentations of not more than 10 minutes were given. At the beginning of each session a short questionnaire was given to each participant. During the session the questionnaire results were analysed by three participants who presented them for discussion afterwards. The key results of the forementioned health care utilization study had been 'translated' into pictures (Fig. 1 for example) and were given to each participant to interpret. Every evening some of the participants met to analyse the events of the day and prepare the programme for the next day.



Fig. 1. What does the picture mean and what can be done about the problem? (The access to modern health facilities is often very difficult. The health service has to be close to the people's door!) About 60% answered the question correctly.

RESULTS

Experiences with the methodology

Left alone, the groups started to talk easily amongst themselves.

The panel discussions revealed pronounced differences in mentality and oratory ability of the Indian groups. Whereas those with a history of tribal independence (Shuar and Saraguros) showed no difficulty in public speaking the 'typical' highland Indians with a history of suppression and economic dependence could hardly be motivated to make a contribution (see [1]).

The impact of socio-cultural change on the health of Indian communities

The participants enjoyed interpreting Fig. 2 which deals with the socio-cultural change of Indian people and the consequences to health. They immediately found several examples for many of the situations indicated in the graph and were able to explain it with their own comments to health officials at the end of the seminar. (Medical students at the University of Guayaquil who were later confronted with the same graph had much more difficulty in understanding it.)

Community support of basic health workers

Twenty-five percent of the health promoters (i.e. two out of eight) felt little and 75% full satisfaction in their work. Thirty-seven percent of the health auxiliaries (i.e. 10 out of 27) felt little and 63% full satisfaction in their work. In the same way, more health promoters (43%) felt the quality of their work to be very good, as opposed to only 19% of the auxiliaries. The analysis of the differences in job satisfaction was important although the differences were not statistically significant (small numbers).

The participants of the seminar interpreted the difference in the following way: the auxiliary has many communities to cover which is often impossible and leads to frustrations; he is partly 'professionalized'; he is responsible to the health officials and not to the community leaders; his salary makes him economically independent and leads to a certain separation

from the community. The health promoter, however, is elected by and responsible to the community and suffers less from the auxiliary's difficulties. He has stronger feelings as to the significance of his work for the community, and—perhaps more important—he is 'fresher' in the job (the duration of the auxiliary programmes was 6–10 years against less than 5 years for the pure Promotor Programme). Despite, this, during other following discussions there was a clear trend towards more professionalism and an adequate remuneration for any kind of primary health worker.

The participants made a list of how to get better community support:

1. To respect customs and traditional medicines in the community.
2. To do a good job, thus, convincing the community of the efficacy of their work.
3. To achieve an interchange of knowledge and to abandon paternalistic health education.
4. To organize health programmes with the community.

Support of basic workers from higher levels

Supervision as on-the-job-training was seen as the most important element in the link between basic and higher health care levels. The evaluation showed up severe deficiencies: in a province with a poor road system and very little infrastructure, about half of the 24 indigenous health auxiliaries had not had any supervisory visit for the last six months. In another province with a better road system seven out of eight health auxiliaries had received regular weekly visits by rural physicians. However, these confined their activities exclusively to the treatment of outpatients. Another group of seven health promoters with good river access received regular and excellent supervision, but by foreign personnel (German volunteers) with a time limit.

In all the cases there was no indirect supervision such as a regular analysis of the monthly forms filled in by basic health workers and sent to the higher levels.

Quality and quantity of the rural physicians' work

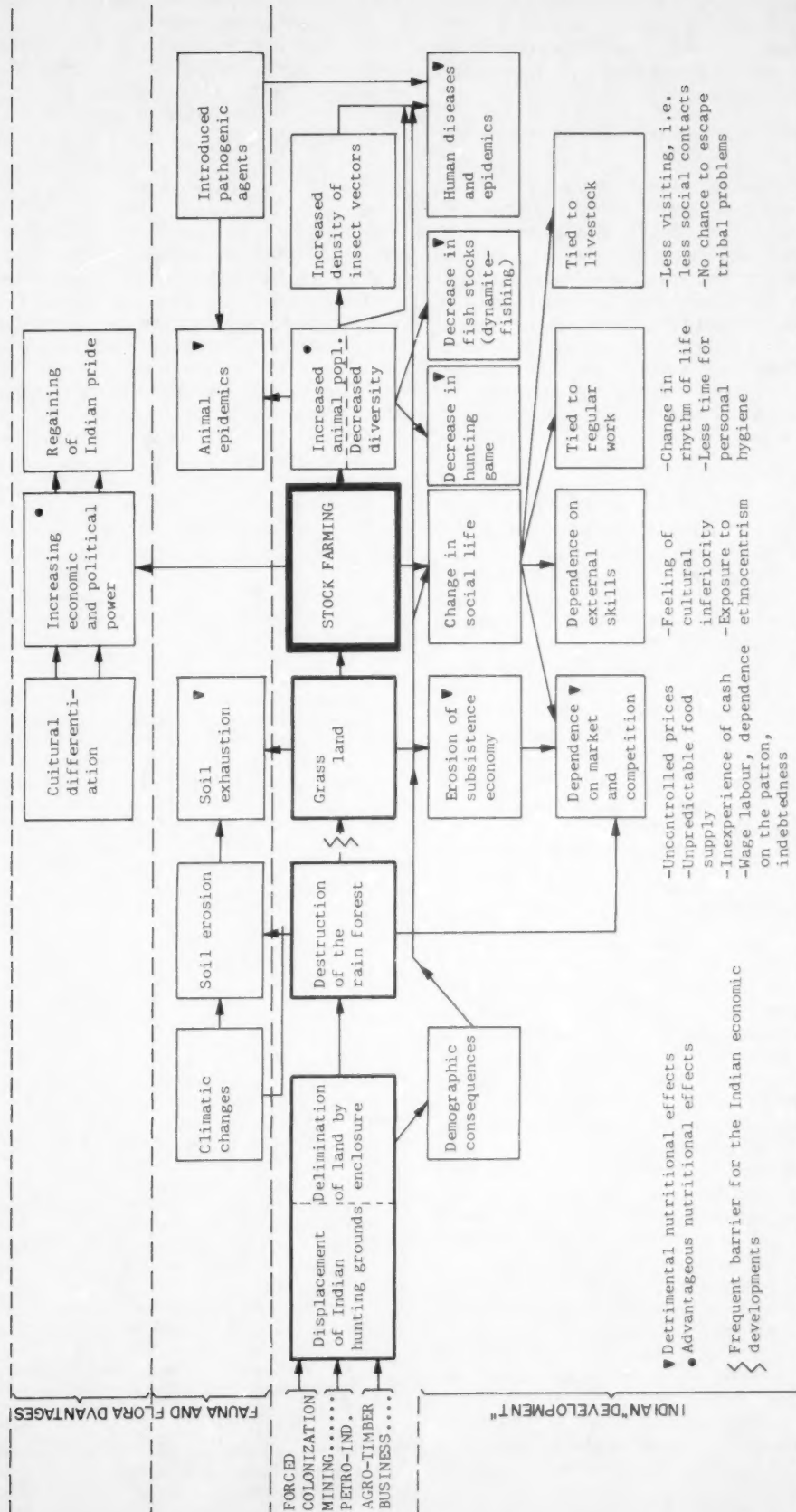


Fig. 2. Consequences of the destruction of the Indian ecosystem (Kroege, 1979). Forced colonization, mining, petroindustry and agrobusiness lead to economic, social and ecological changes, which have severe consequences for Indian life.

in the communities was estimated by all participants as very deficient. They hoped eventually to have auxiliary-supervisors, and specialized physicians who would work permanently in rural areas thus having time to collect experience.

The differential utilization of traditional and modern health services

Instead of presenting research data in the form of a lecture, the participants were invited to discuss the survey questions again, such as why some patients preferred the traditional and others the modern health care system. The reasons were almost the same as the study populations gave two years ago. The main reasons for those preferring traditional healers were the doctor's cultural and geographical distance ('speaks other language, 'feels very superior', 'does not know some diseases') and for the preference of modern medicine the doctor's technical capacity in curing certain diseases.

Participatory planning

The evaluation results were used for planning of future health programmes. Each Indian group put together its own programme. The Quichua of Nabón worked out a detailed job description and time table for visits of a health auxiliary whom they intended to ask for in the provincial health office. The Quichua of Saraguro elaborated a refresher course for their health auxiliaries and calculated the annual costs required for regular supervision of health auxiliaries. The Shuar calculated the annual costs of a detailed programme of routine supervision of health auxiliaries by rural doctors and/or a specially trained auxiliary-supervisor. The Indígenas del Napo (Quijos) presented a memorandum, comprising of a structured programme of attention and supervision of health promoters for after the departure of the foreign personnel.

The meeting with health officials

Officials of the provincial health administrations participated during the last day of the seminar. Their main—typically professional—worry was the anxiety of an 'empirical medicine' carried out by paramedical personnel. However, the discussion on simple forms of tuberculosis control revealed that health auxiliaries knew more about the nationally accepted norms [10] than some professionals.

Some of the administrators found the Indian form of discussion unsatisfactory (frequent repetition of the same argument in order to 'digest' it personally). They had not experienced the dynamics of the group processes during the seminar. Some evaluation results were challenged by health officials who could not believe that supervision was so deficient or even that paramedical personnel was able to do valid calculations of expenditures. Nevertheless, there was an atmosphere of frankness and readiness to listen to the problems of grass root workers. The majority of rural physicians, however—who are meant to be the column of rural medical care in Ecuador—was uninterested in making any contribution to the seminar. (The participatory technique might be particularly helpful for the training and preparation of this target group.)

The question is, for how long the discussion between health administration and primary health workers will be continued and intensified and if similar seminars will be carried out. They could help to overcome ethnocentric and paternalistic positions and also to get a realistic view of the limitations of primary health care.

FINAL COMMENTS

The educative effects on those involved in the collection and analysis of evaluation data has been repeatedly stressed [4, 9, 2, 13, 3]. It is evident that particularly those people who are supposed to gain from its results should participate in an evaluation are situations, where a sophisticated sample survey is required [e.g. 11], but for the evaluation of every day problems in Primary Care Schemes the participatory method described here is surely the more appropriate technology. Manipulation is possibly a danger, in that basic health workers or community representatives could be easily 'directed' by professionals. They think they are doing something on their own, but they are being used to give pre-fabricated results. The method described above might help to reduce this danger.

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